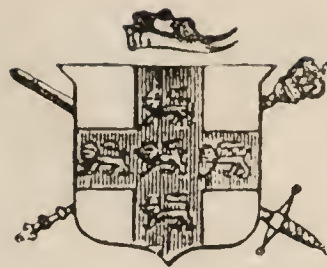


CITY OF



YORK.

ANNUAL REPORT

OF THE


MEDICAL OFFICER OF HEALTH,

FOR THE YEAR 1902.

YORK :

PRINTED BY THE "YORKSHIRE GAZETTE," LIMITED, 15, HIGH OUSEGATE.

1903.



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CITY OF YORK.

THE HEALTH COMMITTEE.

NOVEMBER, 1901, TO NOVEMBER, 1902.

The Right Honourable The Lord Mayor (Ald. L. Foster), *ex-officio*.

Ald. Border (<i>Chairman</i>).	Counr. Lund.
„ Edwin Gray (<i>Vice-Chairman</i>).	„ Hibbett.
Counr. Pearson.	„ Dashwood Carter.
„ Walker.	„ Moss.
„ Fowler Jones.	„ Anderson.
„ Robinson.	„ J. Birch.
„ Blakey.	„ Sampson.
„ T. Carter.	„ Wray.

THE FEVER HOSPITAL SUB-COMMITTEE.

NOVEMBER, 1901, TO NOVEMBER, 1902.

The Chairman.	Counr. T. Carter.
Counr. Walker.	„ Lund.
„ Hibbett.	„ Moss.
„ Dashwood Carter.	„ Anderson.
„ Fowler Jones.	„ Sampson.
„ Robinson.	„ Wray.

PUBLIC BATHS SUB-COMMITTEE.

The Chairman.	Counr. Blakey.
Vice-Chairman.	„ Pearson.
Counr. Walker.	„ Anderson.
„ F. Jones.	„ J. Birch.
„ Robinson.	„ T. Carter.

MEMBERS OF THE STAFF OF THE HEALTH DEPARTMENT.

Edmund M. Smith, M.D., C.M., D.P.H., Medical Officer of Health.
Jonathan Atkinson, Inspector of Nuisances.

1st Half- Year.	{	A. E. Drummond, J. H. Drury, F. Darley,	}	Assistant Inspectors (all certif., Sanitary Institute).	
2nd Half- Year.	{	A. W. Grace. E. Ridsdale. W. D. Swinney.			
					A. Longstaff, Disinfector.
					E. Richardson, Senior Clerk.

Matron of Fever Hospital—Miss Haspell.

Public Analyst—J. Baynes, F.I.C.

Meat and Cattle Inspector—W. Fawdington, M.R.C.V.S.

Canal Boats Inspector—Thos. Leetham.

Superintendent and Matron of the Public Baths—Mr. and Mrs.
Hewitt.

Town Clerk to August 31st—Mr. W. H. Andrew.
,, **after September 1st**—Mr. R. Percy Dale.

THE HEALTH OFFICE,
GUILDHALL,

YORK, *July*, 1903.

TO THE YORK CITY COUNCIL.

MY LORD MAYOR AND GENTLEMEN,

I have the honour to present the Annual Report on the Health of the City during the year 1902, during which period I have had the honour of serving you as Medical Officer of Health. This constitutes my fifth Annual Report.

I have endeavoured to issue a still more complete record of the increasing work of the Health Department, and of all matters bearing upon the health of the Citizens.

I have much pleasure in being able to present facts showing considerable improvement in the health of the City, and I congratulate the Council on the achievements of its progressive policy, and upon the declining death-rate of the City (*see Chart, post*).

May I call your special attention to the very valuable Report of our venerable Inspector of Nuisances summarising the sanitary achievements of the past 30 years, and to my first Report under the Factory and Workshop Act, 1901.

I desire to thank you, and especially the Chairman of the Health Committee, for much kindness and assistance received during the year.

My thanks are also cordially due to my Colleagues, to the Medical Practitioners of the City, to Teachers of Schools and others for their kind co-operation in the work of the Department.

I must also record that all the members of the Staff have worked hard and intelligently.

I am, My Lord Mayor and Gentlemen,

Yours obediently,

EDMUND M. SMITH.

CITY OF YORK.

STATISTICAL SUMMARY FOR 1902

Area in acres, County Borough of York, 3,730.

Number of inhabited houses, Census 1901, 16,550.

Population, Census 1901, 77,914.

Do. Estimated to middle of 1902, 79,114.

Proportion of persons per acre, 20·8.

„ „ per house, 4·70.

Birth-rate, 29·5 per 1,000 living. (In 1901, 30·2; in 1900, 29·3).

Nett general death-rate, 15·3 per 1,000 living. (In 1901, 16·5; in 1900, 20·3).

Infantile mortality, 113·2 per 1,000 births. (In 1901, 147; in 1900, 211).

Mortality of children under the age of 5, 5·0 per 1,000 living at all ages.

Zymotic mortality,	1·25	„	„
(In 1901, 1·9; 1900, 3·8).			

Diarrhœa death-rate,	0·24	„	„
(In 1901, 1·34; 1900, 2·0).			

Death-rate of Bronchitis and Pneumonia	2·3	„	„
--	-----	---	---

Phthisis death-rate,	1·26	„	„
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Cancer death-rate,	0·89	„	„
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ANNUAL REPORT, 1902.

POPULATION.

The population of the City at the end of June, 1902, estimated according to the Registrar-General's method (based upon the rate of increase during the previous decade, 1891-1901, as revealed by the Census of 1901) was 79,114, as compared with 78,044 for 1901. The birth-rate and death-rates in this Report are calculated upon that figure.

The natural increase of population,—*i.e.*, the preponderance of births over deaths—in 1902 was 1,124, as compared with 1,067 for 1901, and 688 for 1900.

During the year the complete Report of the Census of Yorkshire was issued.

The Health Committee published the figures in the Census Report concerning York, separately, for the information of the Council.

The populations of the City portions of the Registration Sub-Districts were as follows at the Census, 1901 :—

Bootham	...	...	...	21,193
Micklegate	...	...	...	25,741
Walmgate	...	...	...	30,980

The River Ouse divides the Micklegate District from Bootham and Walmgate Districts. The River Foss would most naturally divide the two latter districts, but, through some circumstances connected, I surmise, with the old parochial system, Walmgate District comprises Hungate District, a large part of the Groves, and Huntington Road, so that it is much the largest area of the three. It also contains the largest congested areas and the largest poor-quarters of the City. So that figures concerning this district can only be properly compared with those of the other two districts as percentages, or rates per 1,000, of the population.

In the following Report the rates for these districts are calculated upon the above Census figures.

TABLE A.

YEAR.	A. Population as estimated by Registrar-General's method (<i>i.e.</i> , according to rate of increase during decade 1881--1891).	B. Population as estimated according to mere preponderance of Births over Deaths Year by Year (Natural Increase).	C. Population as estimated according to Annual rate of increase between 1891 and 1901, as revealed by Census of 1901.	E. Revised Birth-rate, based upon figures in Column C.	G. Revised Death-rate, based upon the figures in Column C.
1891 (Census)	67,004	67,004	67,004	30.0	23.8
1892	67,807	67,422	67,807	31.9	20.9
1893	69,388	69,086	69,388	29.0	19.9
1894	70,053	69,715	70,392	30.8	17.4
1895	70,723	70,661	71,396	31.0	19.2
1896	71,400	71,507	72,500	30.4	17.8
1897	72,083	72,421	73,604	30.8	18.4
1898	72,774	73,332	74,708	30.0	18.5
1899	73,474	74,189	75,812	30.3	16.6
1900	74,177	75,225	76,916	29.3	20.3
1901 (Census)	77,914	76,292	78,044	30.2	16.5
1902	—	77,416	79,114	29.5	15.3

Average Birth-rate during ten years 1893-1902 inclusive = 30.1.

Average Death-rate ditto = 17.9.

Ditto ditto = 18.2 (*vide* Registrar-General).

Births.

The total number of births notified to me by the Sub-Registrars during the 53 weeks ending January 3rd, 1903, was 2,339.

The total number of births registered in 1901 was 2,361.*

The Birth-rate in 1902 was 29·5 per thousand living, as compared with 30·2 for 1901.

The average birth-rate for the 76 Great Towns for 1902 was 30·0.

The average York birth-rate for the ten years, 1893—1902, was 30·1, and would appear to be slowly declining.

The births in 1902 occurred as follows :—

	Whole City.	Bootham District.	Micklegate District.	Walmgate District.
First quarter of year	581	133	215	233
Second „ „	568	142	190	236
Third „ „	557	153	171	233
Fourth „ „	633	144	214	275
	2,339	572	790	977
Males	1,194			
Females	1,145			
	2,339			

The total number of illegitimate children born in 1902 was 124 (5·3 per cent. of total births)—42 in Bootham District, 38 in Micklegate District, and 44 in Walmgate District.

The birth-rates for the three Registration Sub-Districts, calculated upon the Census (1901) populations of those Districts, were as follows :—

Whole City.	Bootham District	...	...	26·9
—	Micklegate do.	...	...	30·6
29·5	Walmgate do.	...	...	31·5

Infantile Vaccination :—

The total number of children successfully vaccinated in 1901 was 1994; vaccination was postponed in 12 cases; 8 children were declared insusceptible; and there were 35 “conscientious objectors.” The figures for 1902 are not yet available.

* During the 52 weeks ending December 28th, 1901.

With the year 1902 the Registrar-General commenced to issue weekly mortality returns for all towns in England and Wales, the populations of which exceeded 50,000 at the census of 1901, the number of such towns being 76, instead of 33 as heretofore, and including York for the first time. The 76 great towns contain in the aggregate about 45 per cent. of the population of England and Wales.

Deaths.

The gross total number of deaths registered within the City of York during the calendar year ending December 31st, 1902, was 1,257, giving a death-rate of 15·8 per thousand living.

If the deaths of 58 persons not belonging to the City ("Non-residents") be deducted, and those of 16 citizens ("Residents") who died outside the City be added, **the nett total number of deaths was 1,215, giving a nett death-rate of 15·3 per thousand living.**

The average death-rate for the 76 Great Towns in 1902 was 17·4.

It will be seen that these figures compare favourably with the five previous years:—

	Total number of deaths registered.	Gross death-rate.	Nett number of deaths (<i>i.e.</i> , after deduction of deaths of non-residents).	Nett death-rate.
1897	1,392	19·3	1,358	18·4
1898	1,407	19·3	1,386	18·5
1899	1,308	17·8	1,265	16·6
1900	1,613	21·1	1,568	20·3
1901	1,331	17·0	1,294	16·5
1902	1,257	15·8	1,215	15·3

The decrease in nett total of deaths in 1902, as compared with 1901, was 79, and as compared with 1900, 353.

The deaths were registered during the four quarters of the year as follows:—

	Whole City	Bootham District.	Micklegate District.	Walmgate District.
First quarter	357	83	108	166
Second ,,	296	65	91	140
Third ,,	254	54	91	109
Fourth ,,	308	97	108	103
	1,215	299	398	518

N.B.—All the figures relating to deaths for 1902 cover the calendar year, January 1st to December 31st, inclusive.

The average death-rate for the ten years, 1893—1902, was 17·9, so that the city death-rate has declined considerably.

The decrease in the death-rate in 1902, as compared with the year 1901, is chiefly accounted for by the decrease in the number of deaths due to the following causes :—

	Total number of deaths in year 1901.	Total deaths in year 1902.	Decrease.
Typhoid Fever...	15	12	3
Diarrhœa	102	19	83
Enteritis	10	7	3
Puerperal Fever	4	1	3
Tuberculosis of Lungs—Phthisis	109	100	9
Alcoholism	10	5	5
Premature Birth	50	33	17
Developmental Diseases	116	94	22
Meningitis	24	12	12
Organic Diseases of Heart	124	112	12
Diseases of Stomach	18	7	11
Obstruction of Intestines	17	4	13
Nephritis and Bright's Disease	38	31	7
Suicide	15	6	9
Diseases of Spinal Cord	14	9	5

THE LOCAL GOVERNMENT BOARD'S TABLES.

In the accompanying tables deaths occurring in the Public Institutions are allotted to the Sub-Registration Districts, or other localities, according to the addresses of the deceased.

It will be observed that deaths of "Non-residents" are excluded from certain calculations, and deaths of "Residents" are included, according to the instructions of the Local Government Board. The Board defines "Non-residents" as persons brought into the District on account of illness and dying there; and "Residents" as persons who have been taken out of the District on account of illness and have died elsewhere.

In his Annual Summary, just published (July, 1903), the Registrar-General gives the standard death-rate for England and Wales during the 10 years, 1891—1900, as 18·21; for the 76 Great Towns as 17·14; for the City of York as 17·69.

He gives the recorded death-rate for 1902 (53 weeks) for England and Wales as 16·28; for the 76 Great Towns as 17·41; for the City of York as 15·54.

The death-rate, corrected according to sex and age distribution, for 1902 (53 weeks), for England and Wales is 16·28; for the 76 Great Towns 18·50; for the City of York 16·00 (or for ditto, calendar year, 15·80).

Comparative mortality figure:—After making approximate correction for differences of age and sex constitution, the same number of lives that in the year 1902 gave 1,000 deaths for England and Wales as a whole, gave 1,136 in the 76 Great Towns, and 983 in the City of York. In his list of comparative mortality figures York stands 28th in the order of merit of the 76 Great Towns.

There have been decided **increases** in the number of deaths due to the following causes :—

	1901.	1902.	Increase.
Measles	10	39	29
Diphtheria	3	7	4
Tuberculosis of Meninges	11	29	18
Cancer	60	71	11
Senile Decay	78	97	19
Bronchitis and Pneumonia	151	187	36
Accidents and Diseases of Parturition	1	8	7

The distribution of the deaths of York citizens, according to Registration Sub-districts and age-periods, was as follows :—

AGE-PERIOD.	DISTRICT.			Total.
	Bootham.	Micklegate.	Walmgate.	
0—1 ...	58	82	125	265
1—5 ...	25	47	66	138
5—15 ...	10	17	20	47
15—25 ...	12	15	24	51
25—65 ...	101	138	147	386
65 and over ...	93	99	136	328
Totals ...	299	398	518	1,215

Of the deaths in Walmgate District, 27 were of persons connected with the regiments stationed in the various Barracks in that district.

Four deaths were registered as uncertified (*i.e.*, uncertified by medical attendant or by Coroner), viz., 2 in Bootham District, 1 in Micklegate District, and 1 in Walmgate District.

General death-rate in each Registration Sub-District of the City during the year 1902 :—

	Population of District according to Census 1901.	Death-rate.	
Bootham District ...	21,193	14.1	} Whole City, 15.3
Micklegate ...	25,741	15.4	
Walmgate ..	30,980	16.7	

Deaths of York residents (total, 148) occurring in the Public Institutions within the City during the year 1902:—

York Union Workhouse, 86, of whom	{	36 had resided in Bootham Sub-Registration District.
		17 had resided in Micklegate Sub-Registration District.
		33 had resided in Walmgate Sub-Registration District.
York Lunatic Hospital (Bootham Asylum), 3, of whom	{	1 had resided in Bootham District.
		0 " " Micklegate "
		2 " " Walmgate "
York County Hospital (General Infirmary), 58, of whom	{	14 had resided in Bootham District.
		17 " " Micklegate "
		27 " " Walmgate "

The Retreat (Asylum) 1, belonging to the Walmgate District.

In the statistical tables the above deaths are allocated to the Sub-Registration Districts in which the deceased resided.

Deaths of "Non-Residents," *i.e.*, "persons brought into the District on account of sickness or infirmity, and dying in Public Institutions there" :—

At the Union Workhouse	...	...	...	14
At Bootham Asylum	...	...	...	11
At the Retreat...	...	...	...	11
At the County Hospital	...	...	...	20
At a Private Asylum	...	...	...	2
			Total	<u>58</u>

Deaths of "Residents," *i.e.*, "persons taken out of the District on account of sickness or infirmity, and who died in Public Institutions elsewhere" :—

At York Corporation Fever Hospital, 7	{	4 from Bootham District.	
		1 " Micklegate "	
		2 " Walmgate "	
At the North Riding Asylum, Clifton, 6	{	3 from Bootham District.	
		2 " Micklegate "	
		1 " Walmgate "	
At the East Riding Asylum, Beverley		1 " Walmgate "	
		—	
		14	
In other towns, but not in Public Institutions	2
			<u>16</u>
		Total	<u>16</u>

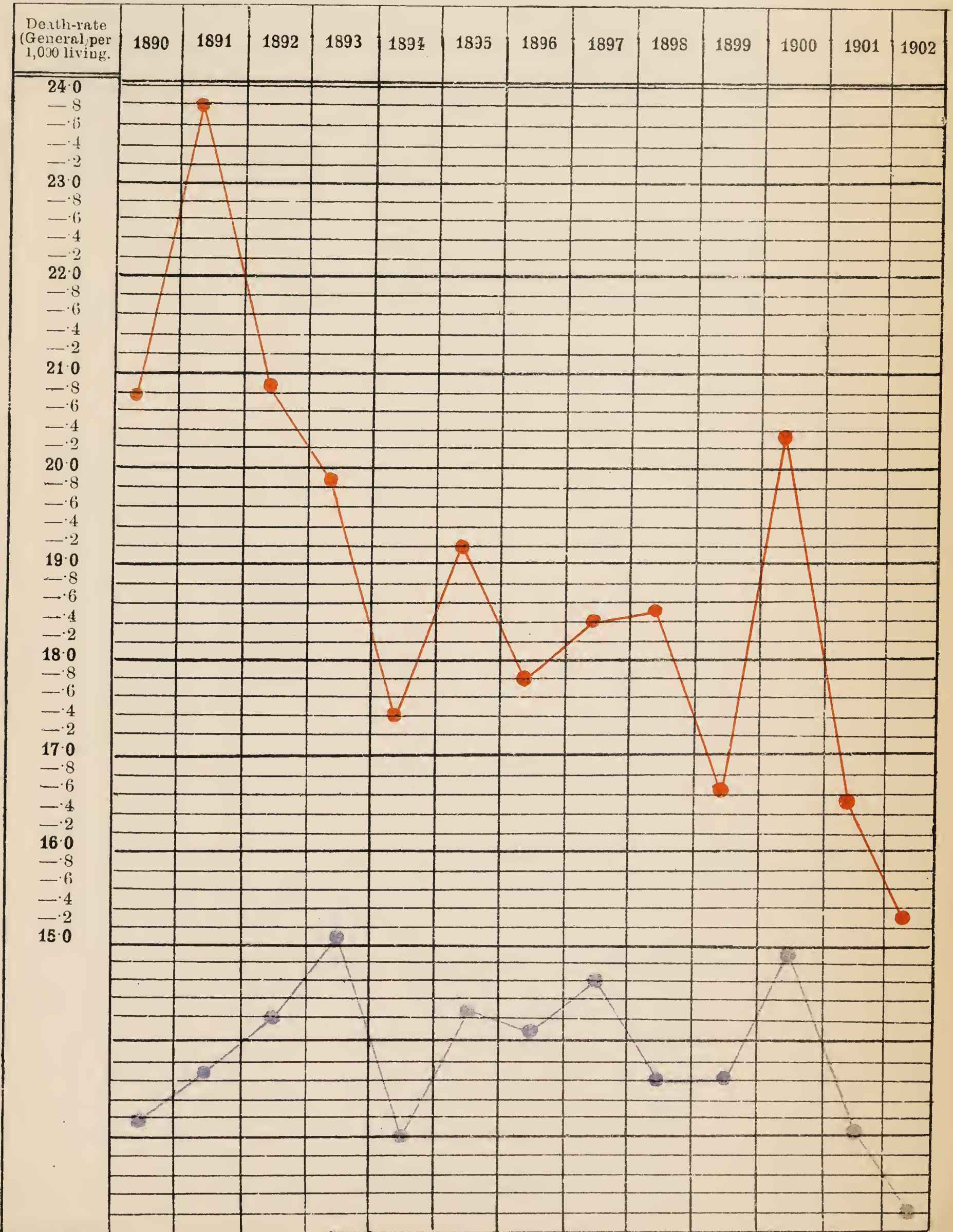
TABLE B. QUARTERLY TOTALS, 1902.

Quarter of Year.	Sub-Registration Districts.	Total Deaths Zymotic Diseases.	Total Deaths Diarrhoea.	Total Deaths Developmental Diseases.	Total Deaths Phthisis.	Total Deaths Bronchitis and Pneumonia.	Total Deaths under One Year of Age.	TOTAL DEATHS.
First.	Bootham ...	4	1	7	6	23	14	83
	Micklegate ...	5	1	6	4	20	22	108
	Walmgate ...	30	0	13	6	29	39	166
	TOTALS ...	39	2	26	16	72	75	357
Second.	Bootham ...	0	0	6	7	10	13	65
	Micklegate ...	13	0	7	7	11	21	91
	Walmgate ...	9	1	12	17	21	33	140
	TOTALS ...	22	1	25	31	42	67	296
Third.	Bootham ...	2	1	3	3	5	13	54
	Micklegate ...	9	2	8	10	8	16	91
	Walmgate ...	8	6	10	10	10	35	109
	TOTALS ...	19	9	21	23	23	64	254
Fourth.	Bootham...	6	1	8	6	16	18	97
	Micklegate ...	2	0	7	9	14	23	108
	Walmgate ...	11	6	7	15	20	18	103
	TOTALS ...	19	7	22	30	50	59	308
TOTALS FOR WHOLE YEAR		99	19	94	100	187	265	1215

CHART SHOWING THE DECLINE IN THE GENERAL AND ZYMOTIC DEATH-RATES OF THE CITY SINCE THE YEAR 1890.

General Death-rate Red Line.

Zymotic Death Rate Blue Line.



The high Death-rate in 1891 was due to the Influenza Epidemic.
The high Death-rate in 1900 was due to the Typhoid Epidemic.

A singular instance, illustrating the variableness of the incidence of the deaths in a town week by week, occurred during the year. In the week ending January 25th the York death-rate was 29·7, as compared with 17·7 the average for the 76 Great Towns, and was the *highest* death-rate amongst the 76 Great Towns. In the following week (ending February 1st) the York death-rate was 7·2, and was the *lowest* of the 76 Great Towns. The average York death-rate for five weeks ending February 1st was 18·4, as compared with 19·1 for the 76 Great Towns.

TABLE C.
COMPARISON OF DEATH-RATES PER 1,000 LIVING
IN YEAR 1902.

	Averages for England and Wales.	Average of the 76 Great Towns (including York).	Average of the 103 smaller towns.	Rural England and Wales.	York.
Death-rate	16·3	17·4	15·3	15·3	15·3
Infantile Mortality (per 1,000 births)	133	145	135	119	113
Zymotic death-rate	1·63	2·12	1·53	1·14	1·25
Measles death-rate	0·38	0·49	0·37	0·27	0·49
Scarlet Fever death-rate	0·15	0·19	0·14	0·10	0·07
Diphtheria death-rate ...	0·23	0·26	0·24	0·20	0·09
Whooping Cough death- rate	0·29	0·37	0·22	0·22	0·20
Typhoid Fever death-rate	0·13	0·15	0·13	0·10	0·15
Diarrhœa death-rate ...	0·38	0·54	0·35	0·22	0·24

Infantile Mortality.

It is satisfactory to be able to record a further marked decrease under this head.

The nett total number of deaths under one year of age in 1902 was 265, or 113·2 per 1,000 births; or 21·8 per cent. of the nett total number of deaths at all ages.

The York average for the ten years 1892—1901 was 177.

These deaths occurred as follows :—

	Bootham District.	Micklegate District.	Walmgate District.	Totals
First quarter ...	14	22	39	75
Second ,, ...	13	21	33	67
Third ,, ...	13	16	35	64
Fourth ,, ...	18	23	18	59
	58	82	125	265

The rates per 1,000 births were as follows :—

Bootham Sub-Registration District, 101 per 1,000 births in that district.			
Micklegate	„	„	103 „ „
Walmgate	„	„	127 „ „

In compiling the statistics, year by year, it has occurred to me that the infantile mortality figure is somewhat unfairly loaded by the number of deaths due to prematurity of birth,—cases in which from the very first the chance of life is very small, lasting usually from only a few seconds to a few days. It appears unfair to add these without qualification to the deaths which occur later on in infantile life, when life has had greater chances. The following table will therefore be of interest :—

Previous years.	No. of deaths.	Proportion per 1,000 births.	Percentage of total deaths at all ages.	Proportion per 1,000 births, after deducting the deaths due to Premature Birth.	
				...	—
1897	455	200·5	33·5	...	—
1898	394	175·6	28·4	...	154
1899	359	156·0	28·4	...	141
1900	477	211·4	30·4	...	191
1901	355	150·3	27·4	...	133
1902	265	113·2	21·8	...	99

DEATHS OF CHILDREN UNDER AGE OF 5 YEARS.

The nett total number of deaths of children under the age of 5 years (0—5) was 403, or 33·1 per cent. of the nett total of deaths at all ages, or 5·0 per 1,000 living at all ages in whole City.

Percentage in previous years	}	1897	...	576 deaths, or 42·2 per cent.
		1898	...	551 „ 39·7 „
		1899	...	477 „ 37·7 „
		1900	...	662 „ 42·2 „
		1901	...	470 „ 36·3 „
		1902	...	403 „ 33·1 „

They were distributed as follows :—

Bootham Registration Sub-District—

83 deaths, or 3·9 per 1,000 living at all ages in that district.

Micklegate Registration Sub-District—

129 deaths, or 5·0 per 1,000 living at all ages in that district.

Walmgate Registration Sub-District—

191 deaths, or 6·1 per 1,000 living at all ages in that district.

The general mortality in 1902, in three age-groups, in the three Registration Sub-Districts, was as follows :—

	Age 0—1.	Age 1—5.	At all ages over 5.	Totals.
Bootham District ...	58	25	216	299
Micklegate ,, ...	82	47	269	398
Walmgate ,, ...	125	66	327	518
Totals ...	265	138	812	1215

The chief causes of death amongst these 403 children at 0—5 years of age were as follows :—

	1901	1902
Premature Birth ...	50	33
Developmental Diseases...	116	93
“ Convulsions ” (only cause named) ...	40	42
Tuberculosis { Tubercular Meningitis, { Tabes Mesenterica, &c. }	25	35
Measles ...	9	37
Whooping Cough...	16	14
Summer Diarrhœa ...	95	19
Bronchitis and Pneumonia ...	59	82
Accidents ...	12	9
Meningitis (only cause named)...	17	10
Enteritis ...	9	4
Scarlet Fever ...	5	5
Diphtheria...	2	4
Erysipelas and other Septic Diseases...	3	6

It is interesting to enquire further into these causes of the infantile mortality, which still continues serious in extent, notwithstanding the progress of hygienic education and of general sanitation. First, the group of

DEVELOPMENTAL DISEASES.

This group comprises the deaths registered as due to “ Injury at Birth,” “ Debility at Birth,” Atelectasis (incomplete development of lungs), Congenital defects (malformed heart, harelip, cleft palate, malformed spine, hydrocephalus, &c.), “ want of breast milk,” atrophy, debility, “ marasmus,” dentition (teething), and rickets.

There is a proportion of these deaths that is not preventible, but there is a larger proportion that is distinctly preventible.

Prominent causes of the large mortality due to these diseases may be stated as follows ;—

- 1.—Carelessness and ignorance as to the rearing of infants on the part of parents and untrained nurses.
- 2.—There is a very great amount of improper feeding of infants,—with improper, unsuitable, positively dangerous foods, and feeding bottles.
- 3.—Excessive feeding of children.
- 4.—Under feeding—starvation.
- 5.—Positive neglect of children and of their ailments.
- 6.—Inherited constitutional conditions.
- 7.—Early marriages, improvident marriages, unhealthy marriages.
- 8.—Untrained midwifery.
- 9.—And, probably, infant insurance.

I have compiled the following figures, which are of considerable interest.

DEVELOPMENTAL DISEASES :—

Registration Sub-District.	Whole year.						Total.	
	Age 0—1.		Age 1—15.					
Bootham	...	21	...	3	...	—	...	24
Micklegate	...	24	...	4	...	—	...	28
Walmgate	...	38	...	4	...	—	...	42
		83		11				94

As deaths from “CONVULSIONS” (where no other cause for death is assigned, in which case the death is classified under that other cause, “Developmental Diseases,” “Meningitis,” or whatever it may be) are largely due to the same predisposing causes as the “Developmental Diseases,” they may be set out similarly :—

Registration Sub-District.	Whole year.						Total.	
	Age 0—1.		Age 1—15					
Bootham	...	3	...	2	...		...	5
Micklegate	...	12	...	3	...		...	15
Walmgate	...	18	...	4	...		...	22
		33		9				42

“Developmental Diseases” and “Convulsions” together :—

Registration Sub-District.	Whole year.						Total.	
	Age 0—1.		Age 1—15					
Bootham	...	24	...	5	...		...	29
Micklegate	...	36	...	7	...		...	43
Walmgate	...	56	...	8	...		...	64
		116		20				136

These 116 deaths at age 0—1=49 per 1,000 births.

“ Developmental Diseases ” and “ Convulsions ” combined, as they occurred during the year :—

Registration Sub-District.	First quarter of year.	Second quarter of year.	Third quarter of year.	Fourth quarter of year.	Total.
Bootham ...	7	11	3	8	29
Micklegate ...	10	11	11	11	43
Walmgate ...	19	20	17	8	64
	36	42	31	27	136

INQUESTS ON ACCIDENTS, &c.

During the year 23 Inquests were held on the deaths of children under the age of 5 years, 3 of children belonging to Bootham District, 8 to Micklegate, and 12 to Walmgate District. The causes of death were as follows :—

Convulsions ...	9	Overlaid by parents in bed ...	4
Debility ...	3	Choked ...	1
Bronchitis and Pneumonia ...	2	Drowned by mother ...	1
Measles ...	1	Scalds ...	1
		Knocked down by Cab ...	1
Total due to illness ...	15	Total accidents ...	8

The Home Secretary called attention early in the year to the frequency with which the death of young children is caused by their clothing taking fire at unprotected fire grates. The loss of life thus brought about being so serious and deplorable, the Home Secretary suggested that public attention should be called to the matter. It appears that in the years 1899 and 1900 the Coroners in England and Wales held 1,684 Inquests on the bodies of children whose deaths had resulted from burning, and that in 1,425 of these cases the evidence shewed that the fire by which the burning was caused had been unprotected by a guard.

The further consideration of the infantile mortality leads to the consideration of the

DEATHS DUE TO THE SEVEN PRINCIPAL ZYMOTIC DISEASES.

SMALL-POX, MEASLES, SCARLATINA, WHOOPING COUGH, DIPHTHERIA, FEVER (TYPHUS AND TYPHOID), AND SUMMER DIARRHŒA.

The total number of deaths from the seven principal Zymotic Diseases in the year 1902 was 99, equivalent to a death-rate of 1.25 per 1,000 living at all ages.

There were 80 deaths due to the Zymotic Diseases *exclusive* of Zymotic Diarrhœa, equivalent to 1·01 per 1,000 living at all ages.

There were 19 deaths due to Zymotic Diarrhœa only, equivalent to a death-rate of 0·24 per 1,000 living at all ages. Of these 19 deaths, 13 were of children under one year of age (as compared with 82 last year). The small number of deaths due to Zymotic Diarrhœa was one of the most remarkable features of last year's mortality statistics, and was largely due to the cold and wet summer.

The average zymotic death-rate of the 76 great towns for 1902 was 2·12 (York 1·25); the average diarrhœa death-rate for the 76 great towns was 0·54 (York 0·24). The average zymotic death-rate for York for the 10 years, 1892—1901, was 2·48, and the average diarrhœa death-rate for the same period was 1·53.

It will be seen that as regards the Zymotic death-rate for 1902, as a whole, and as regards the diarrhœa death-rate in particular, York comes out very creditably as compared with the average for the 76 Great Towns (which include York), and as compared with the averages for the preceding ten years. Unfortunately, this does not hold good for all the other zymotic diseases in York in 1902, as the following table, partly compiled by the Registrar-General, shows :—

ZYMOTIC DEATH-RATES, 1892-1901 and 1902.

	Average Death-rate in York, 1892-1901.	Death-rate in York, 1902.	Average Death-rate, 76 Great Towns, 1902.
Smallpox	0·00	0·01	0·12
Measles	0·28	0·49	0·49
Scarlet Fever	0·06	0·07	0·19
Diphtheria	0·05	0·09	0·26
Whooping Cough	0·31	0·20	0·37
Typhoid Fever	0·25	0·15	0·15
Diarrhœa	1·53	0·24	0·54
Total Zymotic Diseases..	2·48	1·25	2·12
Infantile Mortality (per 1,000 Births) ...	177	113	145

From this table it will be seen that in 1902 the York death-rates for Smallpox, Measles, Scarlet Fever and Diphtheria were in excess of York's averages for the preceding 10 years, whilst those for Whooping Cough, Typhoid Fever and Diarrhœa had considerably diminished, as also the whole zymotic death-rate. The death-rates for Measles and Typhoid Fever in York in 1902 were the same as for the 76 Great Towns, whilst the other death-rates were markedly less than those for the 76 Great Towns.

So that whilst the city has suffered during 1902 by reason of the prevalence of Measles, and by the fatality of its cases of Scarlet Fever and Diphtheria, yet, on the whole, it is to be congratulated, and, when one considers the markedly reduced death-rates from Typhoid Fever and Diarrhœa, credit may well be taken for good results of the vigorous and extensive sanitary work carried out in the city during the last few years.

It ought to be remarked that, in the Registrar-General's report for 1902, his figures cover a year of 53 weeks, whilst mine cover the calendar year. Hence the figures do not quite correspond, but the comparisons remain practically unaltered.

Previous years :—

Year.	Entire Zymotic mortality.				Zymotic Diarrhœa only.			
	No. of deaths.		Rate per 1,000 living.		No. of deaths.		Rate Per 1,000 living.	
1897	264	...	3.6	...	182	...	2.5	...
1898	190	...	2.6	...	120	...	1.6	...
1899	191	...	2.6	...	147	...	2.0	...
1900	297	...	3.86	...	158	...	2.05	...
1901	153	...	1.96	...	102	...	1.3	...
1902	99	...	1.25	...	19	...	0.24	...

The occurrence of deaths due to the seven principal Zymotic Diseases in 1902 was distributed as follows :—

	Bootham District.	Micklegate District.	Walmgate District.	Total.
Measles	3	17	19	39
Scarlet Fever	1	3	2	6
Whooping Cough	0	0	15	15
Diphtheria	1	3	3	7
Typhoid Fever	3	3	6	12
Smallpox	1	0	0	1
	9	26	45	80
Zymotic or Summer Diarrhœa	3	3	13	19
	12	29	58	99

The deaths due to Zymotic or Summer Diarrhœa were distributed as follows :—

Registration Sub-District	Whole Year.				* Third Quarter of Year			
	At Ages :—			Total.	At Ages :—			Total.
	0-1.	1-5.	over 5.		0-1.	1-5.	over 5.	
Bootham	3	0	0	3	1	0	0	1
Micklegate	1	0	2	3	0	2	0	2
Walmgate	9	4	0	13	6	0	0	6
	13	4	2	19	7	2	0	9

* Of the remainder of the year's total, 7 occurred during the fourth quarter of the year.

Of the 19 deaths of the year, 2 were certified as due to "Epidemic or Zymotic Enteritis," and 17 as due to "Summer, Epidemic, or Zymotic Diarrhœa," and "Diarrhœa."

The third quarter of the year was unusually cold and wet, with the result that we had a phenomenally low death-rate from Summer Diarrhœa, etc.

The history of the third, the summer quarter of the year 1902—the Zymotic Diarrhœa period—is set forth in a table as follows :—

THIRD QUARTER, 1902 :—DEATHS.

District.	All Causes		Diarrhœa.		Developmental.		All Causes.	
	Age 0—1.		Age 0—1	All Ages.	Age 0-5		All Ages.	
Bootham	13	...	1	...	3	...	54	
Micklegate	16	...	0	...	8	...	91	
Walmgate	35	...	6	...	10	...	109	
	64		7		21		254	

The Infantile Mortality per 1,000 births in that quarter was 27·3.

In calculating the death-rate from Diarrhœa, deaths certified under the following names are included :—

Diarrhœa, Choleraic Diarrhœa (Cholera Nostras), Intestinal Catarrh, Enteric Catarrh, Epidemic or Summer Diarrhœa, Gastro-Intestinal or Gastro-Enteric Catarrh, Dysentery or Dysenteric Diarrhœa, Cholera Infantum, Epidemic or Zymotic Enteritis, and also Gastric Catarrh, Gastro-Enteritis or Muco-Enteritis, *if of zymotic or epidemic character.*

A separate heading for "Epidemic or Zymotic Enteritis" is provided in Table IV., on the ground that this cause of death has only recently been scheduled by the Registrar-General as "Diarrhœa." By retaining this separate heading for a few years, it will be possible to ascertain the number of deaths which are transferred from "Enteritis" or "Gastro-Enteritis" to "Diarrhœa."

Deaths due to "Diarrhœa" occurring in the course of well-defined diseases such as "Tuberculosis," "Cancer," &c., are not included in the Diarrhœa death-rate or under the heading of "Diarrhœa" at all.

The heading "Enteritis," in Table IV., comprises Non-tubercular or Non-malignant Ulceration of the Intestines, Non-zymotic Enteritis, or Muco, or Gastro-Enteritis.

The following table shows the relationship between the atmospheric temperature, ground temperature, and rainfall on the one hand, and the prevalence of Summer Diarrhœa and Typhoid Fever on the other.

The late DR. BALLARD, in his famous Report on Summer Diarrhœa, arrived at the following conclusions :—

“ The summer rise of Diarrhœal Mortality does not commence until the mean temperature recorded by the 4 foot earth-thermometer has attained somewhere about 56° Fahrenheit, no matter what may have been the temperature previously attained by the atmosphere or recorded by the 1 foot earth-thermometer.

“ The decline of the Diarrhœal Mortality coincides with the decline of the temperature recorded by the 4 foot earth-thermometer, which temperature declines much more slowly than the atmospheric temperature or than that recorded by the 1 foot earth-thermometer.”

The micro-organisms producing Summer Diarrhœa, therefore, are most active in the 3rd quarter of the year (July 1st to September 30th), and their activity is unmistakably associated with certain great conditions, viz., a high temperature, a low rainfall (with calm weather), a high soil temperature and a polluted soil, upon which follow pollution of atmosphere, and of milk and other foods.

SUMMER SEASON, 1902.—DISEASE IN RELATION TO METEOROLOGICAL CONDITIONS.

	Week ending JUNE		Week ending JULY		Week ending AUGUST			Week ending SEPTEMBER			Week ending OCTOBER				
	14th. 21st.	28th.	5th. 12th.	19th. 26th.	2nd. 9th.	16th. 23rd.	30th.	6th. 13th.	20th. 27th.	4th. 11th.					
Deaths from Summer Diarrhoea	0	0	2	0	0	0	1	0	2	2	0	3			
Cases of Typhoid Fever notified	0	1	0	1	3	1	3	1	0	0	3	0			
Mean Temperature of Air ...	49.1	55.1	59.9	59.7	55.9	55.2	56.2	57.7	59.4	59.8	56.2	53.3	56.6	49.7	48
Mean Temperature of Ground (4 feet down)	50	50.5	54	55	55	55	55	55	55.2	56	55.5	55	54.8	54	
Total Rainfall—in inches ...	1.02	0.15	0.43	0.81	0.22	0.59	0.09	1.07	0.08	0.06	0.18	0.09	0.12	0.10	0.84

The measures employed for the prevention of Summer Diarrhœa included frequent flushing of sewers and street and alley drainage, the free use of chloride of lime and other disinfectants for privies and drains, and the use of "Chloros" in watering the streets.

Special advice was issued to the public by advertisement, repeated on two occasions, in "*The Yorkshire Chronicle and Delittle's York Advertiser*," an advertising paper distributed gratis every week to 13,000 houses in the City and district. The advertisement occupied a whole column in each issue, and was published in the last Annual Report.

Whooping Cough.

There were 15 deaths due to this very fatal infantile affliction, as compared with 16 in 1901. All of these occurred in Walmgate District. The death-rate was 0·20 per 1,000 (20 per 100,000) living in the whole City, as compared with 0·31 during the preceding ten years and 0·37 for the 76 Great Towns

Measles.

The number of deaths in 1897	was	28.
„	„	1898 „ 36.
„	„	1899 „ 7.
„	„	1900 „ 40.
„	„	1901 „ 10.

In 1902 there were 39 deaths, 3 in Bootham District, 17 in Micklegate District, and 19 in Walmgate District. The death-rate was 0·49 per 1,000 (49 per 100,000) living as compared with the average 0·28 for the preceding ten years and 0·49 for the 76 Great Towns. The disease prevailed almost entirely in the 1st and 2nd quarters of the year, and spread into Micklegate and Walmgate Districts during the winter 1901—02 from the Groves District. During the year I instituted a system of notification, without fee of course, by Headmasters and Headmistresses of the Elementary Schools, of cases of Chickenpox, Measles, Whooping Cough, German Measles, and Mumps coming to their knowledge. This was instituted in conjunction with the School Board and enabled me to gain knowledge of the existence of cases, to make inquiries in some instances, to exclude members of infected families from school attendance, and to certify for the schools in order that they might obtain the epidemic grant. The system was partially made use of, with advantage to the schools and to the Health Department, but some schools did not appear to appreciate its value. What is really required is that the householder should be held responsible for the notification of these diseases, which should be added to the list of compulsorily notifiable diseases.

My recent experience of compulsory notification of Chickenpox goes to show that, if the householder is made to comprehend his responsibility, he obtains the advice of a medical man, and the result is a large proportion of notifications by medical men.

Scarlet Fever.

During the year 1902, 279 cases were notified, 137 of which were received into the Fever Hospital (see Table III), or 49·1 per cent. There were 6 deaths, giving a death-rate of ·07 per 1,000 (7 per 100,000) living, as compared with the average ·06 for the years 1892—1901, and 0·19 for the 76 Great Towns.

		Cases.		Deaths.		Cases received into Fever Hospital.	
Cases notified in previous years.	1897	...	270	...	1	...	96, or 35·5 per cent.
	1898	...	364	...	8	...	133, or 36·5 „
	1899	...	200	...	4	...	105, or 52·5 „
	1900	...	325	...	4	...	167, or 51·3 „
	1901	...	262	...	7	...	128, or 48·8 „
	1902	...	279	...	6	...	137, or 49·1 „

(See also Table III.)

It is a great pleasure to acknowledge the earnest co-operation of the Managers and Teachers of our Public Schools, and of the Managers of some trade establishments, in connection with the work of prevention of Scarlet Fever and of the other infectious diseases. Without their aid the Health Department would find it almost impossible to curtail the prevalence of Scarlet Fever.

The occurrence of Scarlet Fever was distributed through the year as follows :—

	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.	Totals.
Bootham District ...	12	19	18	18	67
Micklegate „ ...	26	40	22	14	102
Walmgate „ ...	28	21	20	41	110
	66	80	60	73	279

Copies of the handbill, published in 1900, about this disease, were sent to every affected household, and to neighbours, contacts, and even whole streets.

It has not been necessary to close any of the schools during the year because of Scarlet Fever or any of the other infectious diseases.

Of the 137 cases received into Fever Hospital, 8 afterwards proved to be doubtful cases. They were isolated, kept under observation for about four weeks, and then returned home, after disinfectant bath, &c.

Notwithstanding that nearly fifty per cent. of Scarlet Fever cases are removed to the Fever Hospital—where there is better nursing and better isolation—yet the disease is vexatiously persistent, “always with us.” This is largely due to the mild character of a large percentage of present day cases; modern sanitation has at least reduced the average virulent capacity of the disease. Consequently numerous mild cases are overlooked, and are sent to school and allowed to mix with healthy persons. But the disease, however mild, is very infectious; and so the overlooked mild case leads to the occurrence of several more.

By handbills and warnings to householders, schoolmasters, and others we have strenuously endeavoured to diminish the number of overlooked and neglected cases. There is, however, an astonishing and deplorable amount of carelessness on the part of parents as to sickness amongst their children.

During 1902, we had an unusually large percentage of what are called “return” cases—*i.e.*, now and again a hospital case is sent home, to all appearances perfectly cured and free from all infection, and in a few days another case occurs in the same household. This is the experience of all Fever Hospitals, and one which we have been contending against for years. Very special care has been taken not to discharge cases from Hospital too soon, and not until several days (eight to ten) have elapsed after the cessation of all “peeling,” discharges from nose and ears, &c.

A separate building has been erected (Discharging Block) wherein the convalescent patient casts off all infected clothing in one room, has the final bath in another, and dresses in perfectly clean, uninfected clothing, just sent from home, in a third room, from which the patient straightway leaves the Hospital.

Gargling, spraying, or syringing of mouth and throat, and of discharging ears or nose, with Condy’s fluid, boracic acid, &c., has been systematically carried out for years. Special care has always been paid to the disinfection of the hair, especially of the long hair of girls,—and yet we are, to some extent, defeated.

There is no doubt that the mucous secretions of the mouth and throat, and discharges of ears, nose, and ulcers or “sores,” are capable of carrying infection, *i.e.*, the germ thrives persistently therein and is thrown off therefrom even after the germ has ceased to cause trouble to the patient.

The difficulty is the germ. It has not yet been positively discovered—it baffles satisfactory proof. What is believed to be the germ has been found very frequently in the secretions of the throat, only seldom in discharges from nose and ear, and it eludes discovery in the “peeling” skin. But, all the same, I believe the peeling skin to be infectious, at least during the first three or four weeks.

There are probably two conditions to be met with in the convalescent Scarlet Fever Hospital case. (1) The patient may still be the victim of the germ which he throws off from mouth and throat or nose or ear. One of our present difficulties is to know precisely *when* the patient ceases to be the victim of the germ. (2) The patient may be, to all appearance, free of the disease and no longer the victim of the germ, and yet, as he is inevitably inhaling numerous scarlatina germs from the hospital atmosphere, his warm mouth and throat act as a warm incubator in which the germ lives and thrives, though doing the patient no further harm. The patient then returns home, exhales the germs from his incubating mouth and throat into the atmosphere at home, kisses, plays with, perhaps sleeps with, his susceptible brother or sister who inhales these germs, which are probably of very active type, and behold!—you have your return case or cases.

Ever since my appointment as Medical Officer of Health, I have increased from time to time such measures as appeared practicable in the direction of ensuring the absolute freedom of the discharged patient from the elements of infection. The greatest care has always been exercised by me in the discharge of patients. I personally discharge the majority of the cases; the medical attendant usually discharges his own private cases, and I have had no reason to doubt *his* carefulness. Strict instructions to Matron and Nurses have been repeatedly emphasised as to the thoroughness of baths, gargling, washing of clothing and all other disinfectant methods, and as to the freedom of the patient from discharges and sores before leaving hospital—and I believe that these instructions have been carried out faithfully.

No case leaves hospital until all “peeling,” and all discharges from nose and ears, &c., have ceased, sores are healed, and the throat appears quite well.

Infected clothing left behind is disinfected and washed before being returned to the home. I have already referred to the separate building, the Discharging Block.

For some time past I have also made it a rule to advise the parents not to send the child to school for three or four weeks after return home, to send the child out into the open air as much as possible during that period, and to let it sleep alone if possible.

Recently I have extended this method by excluding the child from school attendance for four weeks, by notice to the Schoolmaster.

In searching for a more certain germicidal disinfectant for gargles and sprays, I have recently adopted Chinosol—said to be a powerful, non-poisonous, non-irritating germicide. So far its use has been successful. Used in the strength of 1 in 1,500 it has not proved harmful; bad throats, septic throats and ears, discharging noses have recovered more rapidly under its regular use, and the only return case we have had since its adoption was one due to a very troublesome recurrent case of discharge from the ears (otorrhœa).

I am convinced that our “return” cases have been chiefly due to the mouth and throat acting as incubator. Hence my attack upon the mouth and throat with germicidal gargles, &c. I am quite sure that they have never been due to peeling. Some return cases, however, have been due, I believe, to the discharges from nose or ears which had quite ceased in hospital, recommencing after return home, or not commencing at all until after return home. If such cases as these were at once placed by the parents under medical treatment, probably no further evil would follow, but they are neglected, their danger is not comprehended by the parents (notwithstanding the advice and warning which we frequently give them about this matter), and so fresh infection occurs in the home. For, so far as present knowledge and experience go, although the supposed germ of Scarlet Fever has only rarely been found in the discharges of nose and ears, yet I have had reason to believe that these discharges are very infectious, and in that belief we have always treated them at the Fever Hospital.

I propose in future to issue our warnings to parents—that the child discharged from hospital should be kept at home for four weeks and out in the open air as much as possible, should sleep alone, and avoid kissing, &c., and that discharges from nose or ear should not be neglected, but at once receive medical attention—in the form of a leaflet, to be handed to the parents when the child leaves hospital.

Further measures in the prevention of “return” cases depend upon and consist in :—

1. The establishment of the identity of the germ of Scarlet Fever, and the attainment of complete knowledge respecting it.

This we have to wait for. The work of Dr. Mervyn Gordon (see Local Government Board Annual Reports) and others give hope of its ultimate and perhaps early achievement.

2. The germ an established being, we shall be in a greatly improved position, for we should be much better able to diagnose doubtful cases, and to decide when the

germ had quite disappeared from the patient's throat and discharges. *We are already in such an improved position, to a considerable degree,* with regard to that other persistently infectious disease, Diphtheria.

3. We require more accommodation at the Fever Hospital—above all, we require smaller separate wards for the acute cases, and larger separate wards for the convalescents, with large, airy playgrounds attached to the convalescent blocks. We require to separate the acute cases with their active germs from the convalescents with what ought to be their dying germs. At present we cannot do this, and thus the germ life in the convalescent is maintained by the presence of the acute cases. As soon as the acute stage of the illness is over, the patient should go into the spacious, airy convalescent block, with its playgrounds, until free to return home. And probably two stages of convalescent blocks, an intermediate and, a final, would prove a highly satisfactory arrangement, unless the progress of science should at an early date enable us to detect the germ and secure and prove its destruction, when possibly one convalescent stage would prove enough.
4. The destruction of the germ, if that be possible, or as far as it is possible, in the throat and discharges, before a case leaves the hospital.
5. The supervision of cases after their return home—a rather large additional duty, but one worthy of consideration, although it may prove useless.
6. The exclusion of the patient from school, after return home, for a further period of, say, four weeks, so that he may not affect children at school.

The total number of hospital “return” cases in the city in 1902 was 7, being 2·5 per cent. of total cases of Scarlet Fever notified, or 5·1 per cent. of total city cases received into hospital. Our latter average in previous years was about 3 per cent.

It might be inferred from the above remarks that Fever Hospitals are a failure as regards the prevention of Scarlet Fever. Some writers have recently tried to prove this.

But what about the cases not removed into hospital?

The 142 cases retained at home in York during 1902 gave rise to 64 secondary cases, nearly 23 per cent. of the total cases notified, or 45 per cent. of the total cases retained at home.

This fact speaks volumes in favour of hospital isolation.

What about the spread of Scarlet Fever by home cases—by unrecognised cases, by neglected cases, by cases insufficiently isolated, by cases liberated from isolation before peeling or discharges have ceased? I believe that the degree of spread thus involved is very considerable, and largely accounts for the persistent prevalence of the disease. I have no faith in Cottage home isolation, and hold that almost all cases of Scarlet Fever in the smaller houses, and most certainly where there is more than one child, should go into Isolation Hospital. Another point against Cottage home isolation of Scarlet Fever is that it is not considered necessary by all medical men to visit the

case until the cessation of peeling, &c., so that authoritative supervision of the case practically ceases during the latter part of the infectious period, for it is practically impossible to exercise supervision as to *continued* isolation from the Health Department, although, about the sixth or seventh week, we systematically step in and carry out disinfection of the house, bedding, &c.

I wish that all medical practitioners would attend their cases of Scarlet Fever, if at home, until the termination of known infectious symptoms, but in some cases the cost to the occupier has to be considered, and, on the other hand, some medical practitioners do not care to prolong their attendance upon a disease so infectious for longer than appears to them to be absolutely necessary.

It will be observed, then, (1) that the increase of Scarlet Fever prevalence by hospital cases is very small; (2) that it is very much greater with cases retained at home; (3) that Scarlet Fever Hospitals are not useless, not to be condemned, but that increasing experience points out some features in which their successful administration requires to be completed, in order that the undoubted evils of *aggregation* (viz., septic throat and ear affections, the persistent germ, perhaps the increased virulence of the germ, &c.) may be overcome and the advantages of hospital isolation fully realised. I believe that the evils can be overcome, especially when we get to know the specific germ, when we know how to ascertain its presence or absence in the throat before discharge from hospital, when we know how to make it harmless and secure its final destruction.

Small-pox.

During the year 1902 three cases of Small-pox were notified and removed to hospital, and one of these was fatal.

Case 1. Female, aged 22, in Bootham District; vaccinated in infancy; this case proved somewhat doubtful. Possible origin in travelling between Sheffield and York; 17 contacts were re-vaccinated.

Case 2. December 22nd, male, aged 37, shoeblack outside York Railway Station; he resided at a common lodging-house in Bootham Sub-Registration District. He had not been out of York for over three months; the probable origin of his case appeared to be contact with an infected tramp passing through York. He had never been vaccinated; he was promptly isolated, being the first case in our new Small-pox Hospital, "The Bungalow." His case was a severe confluent one, and he died on January 2nd with hæmorrhage into the pustules. None of the 19 contacts at the lodging-house submitted to re-vaccination, but most of them were detained for from 14 to 17 days and kept under my own observation, and no secondary cases occurred,

Those lodgers thrown out of employment by detention received free bed and board during the period of quarantine. Nine persons were re-vaccinated in connection with this case.

Case 3. Female, aged 34, residing with her husband in Argyle Street, South Bank. Had been well vaccinated in infancy, but not since then. Her's was a modified case, and she made a rapid recovery. About a fortnight before her illness commenced she had served a tramp at her back door with bread and some clothing. This was the only probable explanation of the origin of her case. Possibly it was the same tramp who gave rise to Case 2. Ten contacts were re-vaccinated and no secondary cases occurred.

During the occurrence of these cases I visited several cases about which practitioners or householders were doubtful. These cases proved to be chicken-pox, measles, turpentine rash (1), erythema nodosum (1), accidental inoculation of Vaccinia on the cheek (1).

On December 29th the Health Committee resolved to apply to the Local Government Board for sanction to add Chicken-pox to the list of notifiable diseases under the Infectious Diseases Notification Act, 1889, for a period of six months.

Early in January I addressed the following letter to the public through the columns of the *Yorkshire Herald*. It was entitled:—

A PLEA FOR RE-VACCINATION.

[To the Editor of the *Yorkshire Herald*.]

SIR,

In view of the very serious continued prevalence of small-pox in London and neighbourhood (150 to 200 cases per week), and in view of the decided spread of the disease into the provinces now taking place, will you permit me to point out to our citizens that those who have reason to visit the Metropolis, with its vast population, its enormous traffic, and its incessant intermingling of all sorts and conditions of men, should seriously consider the desirability of availing themselves beforehand of the one and only means of prevention, viz., thorough re-vaccination, for the sake of self, for the sake of family and friends, and for the sake of their fellow-citizens to whom they will return.

The slight discomfort caused by the simple operation of re-vaccination is as nothing to the misery of that loathsome and terrible disease now afflicting the Metropolis.

Thanking you for the use of your columns.

Yours, etc.,

EDMUND M. SMITH,

Medical Officer of Health.

GUILDHALL, January 6th.

At a meeting of the Health Committee, on February 7th, 1902, a letter was read from the Clerk to the Beckenham Urban District Council, stating that circumstances had impressed upon his Council the unwisdom of Clause 2 of the Vaccination Act, 1898, which allows the Conscientious

Objector to escape vaccination, and that the Council had passed a resolution asking the Local Government Board to take steps to repeal the Clause, and requesting the York Corporation to pass a similar resolution.

Resolved by the York Health Committee :—

That the Council be recommended to pass the following resolution :—

“ That this Council, as the Sanitary Authority for the City of York, is strongly of opinion that, in the interests of public health, Clause 2 of the Vaccination Act, 1898, relating to the Conscientious Objector should be repealed, and that with a view to securing this desirable result a copy of this resolution be sent to the Local Government Board.”

An attempt was made to defeat this resolution in the City Council, but the resolution was carried by 36 votes to 4.

Diphtheria and Membranous Croup.

Cases notified in	1897	...	36	;	deaths,	5.
„	„	1898	...	14	;	„ 2.
„	„	1899	...	28	;	„ 4.
„	„	1900	...	19	;	„ 6.
„	„	1901	...	40	;	„ 3.
„	„	1902	...	32	;	„ 7 (nearly 22 per cent. of cases).

In some of these cases defects in the drainage arrangements or surroundings of the houses were discovered and dealt with in the usual manner.

The case-mortality was unusually high. The death-rate was $\cdot 09$, as compared with $\cdot 05$ for years 1892—1901, and $0\cdot 26$ for the 76 Great Towns.

The cases in 1902 occurred as follows :—

8	of the cases occurred in	Bootham District.
13	„	„ Micklegate District.
11	„	„ Walmgate District.

10 in the first quarter of the year ; 7 in the second ; 3 in the third ; 12 in the fourth. (See also Table III.)

All the cases in 1902 were notified as “ Diphtheria.”

Enteric (Typhoid) Fever.

Owing largely, no doubt, to the coolness of the summer we had a very marked diminution in the prevalence of Typhoid Fever in the year 1902. The Corporation may also reasonably take credit for the good results of the active preventive work which they are carrying on, for I fully believe that we are reaping the benefit of work achieved.

Under the heading "Summer Diarrhœa," the relations of the atmosphere and ground temperatures to the prevalence of the disease are shown. These facts also relate to Typhoid Fever.

Further meteorological particulars will be found at the end of the Report.

During the year 1902, 60 cases of Typhoid (Enteric) Fever were notified. Of these 4 afterwards proved not to be Typhoid Fever; one being Pneumonia, two Tubercular Meningitis, and one Febricula. Of the remaining 56, 12 died; 4 in the County Hospital, 2 in the Fever Hospital, and 6 at their own homes.

The death-rate from Typhoid Fever for the year 1902 was therefore 0·15 per thousand living, or 21·4 per cent. of cases notified, which was a decidedly high rate of mortality.

The attack-rate per 1,000 of the population was 0·7, as compared with 1·5 in 1901 and 3·2 in 1900.

The following are the statistics for the previous five years:—

Year.	Cases.	Deaths.	Percentage of deaths to cases.	Death-rate per 1,000 living.
1897	106	20	18·8	0·29
1898	132	17	12·8	0·22
1899	134	26	19·4	0·34
1900	244	38	15·5	0·49
1901	121	15	12·4	0·19
1902	56	12	21·4	0·15

During the first half of the year 1902 (January 1st to June 30th) there occurred 25 cases; during the second half of the year (July 1st to December 31st) there occurred 31 cases.

The age-distribution for the year was as follows:—

Age Group	Cases.	Deaths.	Case-Mortality per cent.
Under 5 years of age	1	0	0·0
5—15	16	3	18·7
15—25	19	4	21·0
25—65	20	5	25·0
65 and upwards	0	0	0·0

There were no Secondary Cases in the same house or family.

Nine cases (16 per cent.) would appear to have contracted the disease outside the City, having been resident or visiting elsewhere prior to the incubation period of the disease. Of these, 6 fell ill in York, whilst resident at houses with good water-closets and good drainage, and 3 at midden-privy houses.

CASES NOTIFIED DURING EACH MONTH OF THE YEAR.

January	10	}	18 during the quarter.	
February	...	4			
March ...	...	4		
April	4	}	7 do. do.	
May ...	...	3		
June ...	...	0		
July	6	}	13 do. do.	
August ..	...	5		
September	...	2			
October	6	}	18 do. do.	
November	...	10			
December	...	2			
		—			
		56			
		—			

In the following tables the cases are classified according to Sub-Registration Districts and localities, and the relationship between the houses affected and general sanitary conditions is set forth.

The 56 cases were distributed amongst 56 houses.

Of these 56 houses,

29 possessed **privy-middens**,
and 27 water-closets.

At 4 of the 29 midden-privy houses occurred
4 cases originating outside York.

Deduct, also, 1 house which was unfit for human habitation.

There were, therefore, 24 houses where the cases were associated with privy-middens only.

At 5 of the 27 **water-closet houses** occurred
5 cases originating outside York.

At 9 the drainage was defective.

At 1 the house was unfit for habitation.

At 2 there was a defective yard pavement.

At 11 the origin of the cases was inexplicable.

Further details are given in the following tables and notes ;—

BOOTHAM SUB-REGISTRATION DISTRICT.

Street or Neighbourhood.	Total Cases.	Secondary Cases (included in total).	Cases which originated out of York.	Total Houses affected.	Houses with Privy-middens.	Houses with Water-closets.	Water-closet Houses with defective Drainage.	Houses with very defective Yard Pavements.	Remarks.
Newbro' Street District—									
Newbro' Street ...	2	2	2	
Upper Newbro' Street ...	2	2	2	
Totals, Newbro' Street District..	4	4	4	
St. Peter's Grove ...	1	1	...	1	The 4 cases which originated outside the City of York fell ill at houses with w.c.'s where there were no defects of drainage.
Marygate Estate ...	2	...	...	2	1	1	...	...
Bootham ...	1	...	...	1	...	1	1	...
Skelton Street ...	2	...	1	2	...	2	...	...
Central part of City ...	2	...	1	2	...	2	1	...	
Groves District ...	2	...	1	2	...	2	...	...
Haxby Road District ...	4	...	1	4	3	1	...	...
Totals, Bootham Sub-Registration District ...	18	...	4	18	8	10	2	...	

Bootham Sub-Registration District.

It will be observed that in this district 8 of the houses affected have privy-middens, 4 in Newbro' Street District, 1 in Marygate Estate—both being Typhoid affected areas,—and 3 in Haxby Road District. During the year 3 of these privies were substituted by water-closets.

At 4 of the 10 affected water-closet houses in this district occurred cases whose illness originated outside the City.

At 2 there was defective drainage. At 3 no defects could be discovered, and no probable origin of the illness could be traced. At 1 the illness was evidently contracted owing to the defective drainage of the workshop where the deceased was employed.

The defective drains were made smoke-tight or reconstructed.

MICKLEGATE SUB-REGISTRATION DISTRICT.

Street or Neighbourhood.	Total Cases.	Secondary Cases (included in total).	Cases which originated out of York.	Total Houses affected.	Houses with Privy-middens.	Houses with Water-closets	Water-closet Houses with defective Drainage.	Houses with very defective Yard Pavements.	Remarks.
Leeman Road District ...	3	...	1 (a)	3	3	...	...	...	(a) These cases fell ill at privy houses
Streets off Holgate Road	1	...	...	1	1	...	...	...
Bishopthorpe Road Streets	1	...	...	1	1	...	...	...
Scarcroft Road ...	2	...	1 (a)	2	1	1	...	...
Nunnery Lane ...	4	...	...	4	2	2	1	...	
Skeldergate ...	1	...	...	1	...	1	1	1	
Micklegate ...	2	...	1 (b)	2	...	2	...	...
Rougier Street ...	1	...	1 (a)	1	1	...	...	...	(b) This case fell ill in York at a w.c. house.
South Bank ...	2	..	...	2	1	1	...	1	
	17	...	4	17	10	7	2	2	

Micklegate Sub-Registration District.

At 3 of the 10 privy-midden houses affected in this district occurred cases whose illness originated outside the City.

At 4 houses the privy-middens appear to have been so distinctly associated with the cases occurring there, that they have been converted into water-closets.

At 1 of the 7 affected water-closet houses in this district occurred a case whose illness originated outside York City. At 2 there was defective drainage, and the drainage has been reconstructed.

At 4 houses the water-closets and drainage were in perfect working order, and the possible origin of the cases could not be in any way traced.

WALMGATE SUB-REGISTRATION DISTRICT.

Street or Neighbourhood.	Total Cases.	Secondary Cases (included in total).	Cases which originated out of York.	Total Houses affected.	Houses with Privy-middens.	Houses with Water-closets.	Water-closet Houses with defective Drainage.	Houses with very defective Yard Pavements.	Remarks.
Navigation Road ...	1	...	...	1	...	1	...	...
Lawrence Street District ...	1	...	...	1	1	...	...	...
Hungate District ...	3	...	...	3	1	2	1	...	One of the houses in Hungate District had a very foul w.c., and another w.c. house was unfit for habitation.
Piccadilly ...	1	...	...	1	...	1	1	...	
Dennison Street ...	1	...	...	1	1	...	...	...
St. Maurice's Road ...	1	...	...	1	1	...	...	...
Sandringham Street ...	2	...	...	2	2	...	...	...
Marlboro' Grove ...	2	...	...	2	...	2	2	...	
Layerthorpe Streets ...	4	...	...	4	2	2	...	...	One of the Layerthorpe houses with privy-midden was unfit for habitation.
Other Fishergate Streets ...	3	...	...	3	1	2	1	...	
Heslington Road ...	2	...	1	2	2	...	...	...
	21	...	1	21	11	10	5	...	

Walmgate Sub-Registration District.

At 1 of the privy-midden houses affected in this district the patient contracted the disease outside the City.

Of the 11 privies, 2 were converted into water-closets, and 8 are held in abeyance pending further investigations; 1 of the privy-midden houses was unfit for human habitation and has since been made fit and greatly improved.

Of the 10 water-closet houses, 5 had defective drainage and 1 was unfit for habitation. At 4 the cases remain a mystery; no defects of drainage or other probable origin was discovered.

It will be observed that the areas most affected in 1902 were:—

Newbro' Street District	...	...
Haxby Road	„	...
Nunnery Lane	„	...
Hungate	„	...
Layertorpe	„	...
Fishergate	„	...

The Newboro Street, Holgate Road, Leeman Road, Bishopthorpe Road, Hungate, Skeldergate, Heslington Road, and Walmgate Districts showed very great improvement as compared with previous years.

Haxby Road and Fishergate Districts were rather prominent new Districts in 1902.

There was no connection discovered between the cases of 1902 and the City water supply, the City milk supply, or the consumption of oysters or ice-creams.

The milk supply of the 56 cases was distributed amongst over 33 cow-keepers.

Special preventive measures re Typhoid Fever:—

1. 7 cases were received into the Corporation Fever Hospital, and 10 into the County Hospital (General Infirmary).

2. The special pails for the collection and removal of the excreta of typhoid cases, purchased in August, 1900, served all the cases of 1902 which were not sent into Hospital. They served 39 cases, and largely prevented,

therefore, the specific pollution of 39 privies and house drains. The pails were sent out containing strong carbolised fluid ; and the excretal contents were buried in pits, away from houses, freely mixed with lime and earth. I feel sure that this special system is doing a valuable preventive work, as it is of the highest importance that, as far as possible, privy-middens, and house drains which may be defective, should not be infected.

3. Some special attention was paid to the flushing of sewers and street gullies and the emptying of privy-middens, in the affected districts especially ; and disinfectants were used freely after the cleansing of privies and gullies, and were given away for use to house drains, &c.

4. Special attention was also given to the scavenging of narrow streets in congested areas, and streets were watered with chlorinated water.

5. The work of abolition of infected and foul midden-privies progresses steadily.

DEATHS DUE TO BRONCHITIS, PNEUMONIA, AND PLEURISY.

In 1897, 192	were registered,	or 2·6	per 1,000	living.
In 1898, 224	„	or 3·0	„	„
In 1899, 188	„	or 2·5	„	„

In Table IV., Bronchitis and Pneumonia *only* are now classed together, *i.e.*, Acute Bronchitis, Chronic Bronchitis, Lobar (Croupous) Pneumonia, and Lobular (Broncho-) Pneumonia ; Pleurisy and other diseases of the respiratory organs, exclusive of Phthisis, from which there are only a very few deaths annually, are now classed amongst “all other causes.”

From Bronchitis and Pneumonia in 1902 there were 187 deaths registered, or 2·3 per 1,000 living, or 15·3 per cent. of total deaths from all diseases.

In 1900, 242 deaths, or 3·2 per 1,000 living, or 15·4 per cent.
In 1901, 151 deaths, or 1·9 per 1,000 living, or 11·6 per cent.

The deaths from Pneumonia and Bronchitis in 1902 occurred as follows :—

1st Quarter	...	72	3rd Quarter	...	23
2nd Quarter	...	42	4th Quarter	...	50

Their distribution in districts and in age-periods is shewn in Table IV.

TUBERCULOSIS.

Deaths due to Phthisis.

(Tuberculosis, "Consumption" of Lungs).

In 1902 there were 100 deaths due to Phthisis,
a death-rate of 1·26 per 1,000 living; (126 per 100,000);
or 8·2 per cent. of total deaths from all diseases.

They occurred during the year as follows:—

1st Quarter	...	16	3rd Quarter	...	23
2nd Quarter	...	31	4th Quarter	...	30

Phthisis.—Comparison with Previous Years.

Year.	Number of Deaths.	Death-rate per 1,000 living.	Death-rate per 100,000 living.	Percentage of Total Number of Deaths from all Diseases.
1897	102	1·38	138	7·5
1898	121	1·68	168	8·6
1899	103	1·40	140	7·8
1900	110	1·48	148	7·0
1901	109	1·39	139	8·4
1902	100	1·26	126	8·2

48 (nearly 50 per cent.) of the deaths in 1902 occurred in Walmgate Sub-Registration District; 22 occurred in Bootham District, and 30 in Micklegate District.

Death-rates per 1,000 living:—

Bootham District	...	1·02 (102 per 100,000).
Micklegate „	...	1·15 (115 „ „).
Walmgate „	...	1·52 (152 „ „).

Deaths due to other forms of Tuberculosis.

TUBERCULAR MENINGITIS, TUBERCULAR ENTERITIS, TABES MESENTERICA,
"ACUTE MILIARY" AND "GENERAL TUBERCULOSIS."

Year.	Number of Deaths.	Per 1,000 living.	Per 100,000 living.	Tubercular Meningitis only; Number of Deaths.
1898	45	0·61	61	—
1899	59	0·80	80	—
1900	46	0·62	62	20
1901	38	0·48	48	11
1902	50	0·63	63	29

Deaths due to all forms of Tuberculosis in 1902.

	Bootham Sub-Registration District.	...	Micklegate Sub-Registration District.	...	Walmgate Sub-Registration District.	...	Totals.
Phthisis	22	...	30	...	48	...	100
Tubercular Meningitis...	4	...	16	...	9	...	29
Other forms of Tuberculosis	8	...	3	...	10	...	21
	34	...	49	...	67	...	150

Death-rate per 1,000 living : 1.50 ... 1.88 ... 2.12 ... 1.88

The total of 150 deaths was equivalent to a death-rate of 1.88 per 1,000 living (188 per 100,000), and constituted 12.3 per cent. of total deaths from all diseases.

	Year.	Phthisis.	Other Tubercular Diseases.	Total.	Death-rate per 1,000 living.	Death-rate per 100,000 living.
Previous Years.	1898	121	45	166	2.29	229
	1899	103	59	162	2.20	220
	1900	110	46	156	2.10	210
	1901	109	38	147	1.88	188
	1902	100	50	150	1.88	188

Investigations in cases of Phthisis during year 1902.

With the beginning of the year 1902 we commenced the system of the Voluntary Notification of cases of Phthisis-with-expectoration. During the year 66 separate cases were notified to the Medical Officer of Health by Medical Practitioners. Inquiries were made in 64 of these, two having left the address given before inquiries could be made. In addition to these, inquiries were also made in connection with 51 cases intimated by the Sub-Registrar's Death Returns. So that a total of 115 inspections were made.

Of the total 100 deaths, due to Phthisis, occurring in the City during the year, 51 were investigated, 15 were not investigated (4 being at the Work-house, 9 where inspection was not necessary, and in 2 the relatives had left the house before inspection); 35 of the cases notified during life died within the year. At only one house was inspection positively resented.

16 specimens of sputum were examined for Bacilli of Tubercle; 3 with positive and 13 with negative result.

Of the 115 cases investigated, 70 were males, 45 females; 3 were at ages 0-5, 9 at 5-15, 23 at 15-25, 78 at 25-65, and 2 at ages over 65. (See also table at end of this Section of Report.)

Isolation :—

63 cases occupied a separate bedroom and 83 slept in a separate bed. These facts are more satisfactory than was to be expected.

At 19 of the houses there was decided overcrowding ; but, at as many more, there were probably too many persons in proportion to the number of bedrooms, considering that there was a case of Phthisis in the house.

Heredity :—

In only one case had a parent died of Phthisis in the same house ; in 14 cases one or both parents had died of Phthisis in other houses than the one now investigated. So that only 15 of the 115 cases inspected were influenced by the possible inheritance of tubercular predisposition.

That, I think, is a startling contribution to the modern belief that, whilst a tubercular predisposition may be inherited, tuberculosis as a disease is not inherited.

Family Infection :—

In two cases brother or sister had died of Phthisis in the SAME HOUSE ; in two houses children had previously perished of the disease ; at one a husband, and at another an aunt. In nine cases brother or sister had died AT OTHER HOUSES, in three cases children, and in one case a wife.

Altogether, there were 32 cases, out of the 115, in connection with which other cases of Tuberculosis had occurred.

In seven cases there were features of special interest, bearing upon the communicability of the disease, and the need for supervision, advice, disinfection, &c., in cases of this disease amongst the working classes :—

- (1) Two brothers and a sister had previously died of Phthisis in the same back-to-back house.
- (2) Mother now ill of Phthisis ; five of her children had died of it, two of them in the same house.
- (3) Two sons now suffering from Phthisis ; a daughter had died of it in the same house.
- (4) Husband died of Phthisis in the spring of 1902 ; two children have since died of Tuberculosis in the same house.
- (5) Patient has resided in three different houses during the illness. (5 years).
- (6) Patient has resided in six different houses during the illness. (2 years and 8 months).
- (7) Patient has resided in four different houses during the illness. (3 years).

Occupations :—

Eight of the cases were children, 30 were women engaged in housework, four were female domestic servants, two had been Bradford mill girls.

The remaining cases gave their occupations as the following :—Labourers, 9; boatmen, 3; tailors, 2; engine-drivers, 5; painters, 2; joiners, 6; hawkers, 2; mason, 1; chemist, 1; maltster, 1; glass-blowers, 5; cocoa workers, 3; clerks, 5; saddlers, 2; gardeners, 2; mechanics, 7; school teachers, 2; dressmaker, 1; musician, 1; farm servant, 1; blacksmith, 1; groom, 1; cellarman, 1; printer, 1; soldiers, 4—3 of whom had returned from the war in South Africa.

Condition of the inspected houses :—

Three were decidedly dirty; 14 only fairly clean; 28 were found to have walls or ceilings damp; 23 were ill-ventilated (9 being back-to-back houses); 92 were capable of through ventilation; 36 had only poor access for sunlight; 4 houses were declared unfit for human habitation, 1 was improved and 3 were closed either voluntarily or per Magistrates' order; at 33 other houses there were gross sanitary defects—defective drains, foul middens, very defective yard pavements, &c.

The gross sanitary defects and damp roofs, &c., have all been corrected as far as possible.

Measures of Prevention :—

- (1) One of our leaflets on the Prevention of Consumption has been sent to every affected house.
- (2) A special note of advice as to cleaning, disinfection, &c., has been sent to the householders in respect of each death.
- (3) Special advice has been given by the Medical Officer of Health or Inspectors during their visits, where it seemed necessary.
- (4) 34 beds of patients have been steam-disinfected.
- (5) 303 other articles have been steam-disinfected.
- (6) 45 infected rooms have been fumigated.
- (7) In a large number of cases the infected house or rooms have been cleansed upon our instructions—wallpapers stripped, ceilings and walls lime-washed, &c.
- (8) In the case of very dirty houses, cleansing has been procured by compulsory order (Notice to cleanse and limewash).

We have not interfered with the employment of any person, and in much the patient and his co-residents have necessarily been left to the advice of the medical attendant.

It does seem a pity that this good work—for it is a good work, bound to yield life-saving results—cannot be extended as it would be if compulsory notification of Tuberculosis were to come about. This will undoubtedly come about in time; the pity is that, meanwhile, lives are being lost and much good work lies undone and inaccessible.

I wish we could do more even now. What we want is an intelligent labourer to go round to the Phthisis-affected houses of the poor, to soak and strip wallpapers, periodically limewash, and do other work of disinfection, which the poor either cannot afford to do, or cannot be trusted to carry out thoroughly. Splendid work in this direction has been done by the Manchester and other Health Departments. I also wish we could repeat our calls of inspection more frequently, but with our present staff and work this is utterly impossible.

It only remains for me to say that in the course of our investigations we have been very well received by the households, on the whole, and that our Inspectors have shown a very intelligent appreciation of the requirements of the work.

The cost of the 66 Notifications amounted to £8 5s. od.

Distribution of Cases of Phthisis in 1902 in Age Periods and Sub-Districts.

Age Period. Years.	Cases Notified still living as far as known.	Fatal Cases.	Total.
Under 1	0	1	1
Over 1 and under 5	0	3	3
5—15	3	6	9
15—25	3	26	29
25—35	12	25	37
35—45	7	20	27
45—55	1	11	12
55—65	2	8	10
65 and over	1	3	4
Totals ...	29	103	132

Cases in Sub-Districts :—

Bootham Sub-Registration District	...	28
Micklegate	do. do.	41
Walmgate	do. do.	63

		132

The Medical Officer of Health reported to the Health Committee on February 7th, 1902, that the question of placing notices in railway stations and railway carriages regarding the dangers of spitting was being dealt with by the National Association for the Prevention of Consumption, and the Committee accordingly decided not to take any action in the matter.

Resolved :—

“ That a representation be made to the North Eastern Railway Company by the Medical Officer of Health as to the more thorough and careful wet cleansing of railway station platforms and railway compartments.”

Resolved :—

“ That the Chief Constable be requested to instruct the police to caution persons against sweeping the dust, &c., from the floors of their premises into the streets after nine o'clock in the morning, and without previous wetting of the floors.”

CANCER.

Under the title Cancer are comprised :—Deaths from Cancer, Carcinoma, Malignant Disease, Scirrhus, Epithelioma, Sarcoma, Villous Tumour and Papilloma of Bladder, Rodent Ulcer.

During the year 1902 there were 71 deaths from Cancer in the City, or 0·89 per 1,000 living. The figures for previous years are as follows :—

	Total Deaths.	Death-rate per 1,000 living.	Death-rate per 100,000.
1899	68	0·89	89
1900	70	0·91	91
1901	60	0·76	76
1902	71	0·89	89

In 1902, 41 of the deaths occurred between the ages of 25 and 65, and 30 at ages over 65.

The following table differentiates the deaths according to the certified primary seat of the disease :—

“CANCER,” “MALIGNANT DISEASE,” “SCIRRHUS,”

OR

“CARCINOMA” :—	Bootham District.	Micklegate District.	Walmgate District.	Totals.
Face and jaw ...	0	2	1	3
Female breasts ...	2	1	0	3
Mouth ...	1	0	1	2
Tongue ...	1	0	0	1
Stomach ...	0	7	6	13
Intestine ...	1	0	4	5
Liver ...	6	3	3	12
Pancreas ...	1	1	0	2
Peritoneum ...	1	1	0	2
Œsophagus (gullet)	1	2	0	3
Rectum ...	0	1	0	1
Uterus and Vagina ...	4	9	4	17
Ovary ...	0	1	0	1
Vertebra ...	0	1	0	1
Pelvis ...	0	1	1	2
SARCOMA :—				
Clavicle ...	0	0	1	1
Scapula ...	0	0	1	1
Ovary ...	0	0	1	1
Leg ...	1	0	0	1
	19	30	22	71

None of the deaths were certified as Epithelioma.

INQUESTS.

During the year 1902, 70 Inquests (5·7 per cent. of total deaths) were held on the deaths of York citizens, as compared with 93 Inquests (7·1 per cent. of total deaths) in 1901. They are classified as follows :—

Deaths from Natural Causes.

	Bootham District.	Micklegate District.	Walmgate District.	Total.
Cancer	0	1	0	1
Apoplexy	1	1	0	2
Heart Disease	3	2	5	10
Measles	0	0	1	1
“ Convulsions ”	1	4	5	10
Old age	2	0	1	3
Ill-defined	1	0	2	3
Alcoholism	0	0	1	1
Blood-poisoning	0	1	0	1
Premature Birth	0	1	0	1
Bronchitis and Pneumonia	0	2	0	2
Obstruction of Intestines	0	1	1	2
Post Partum Hæmorrhage	0	1	0	1
	8	14	16	38

Deaths by Accident and Suicide.

There were 23 deaths due to Accident and 8 to Suicide, which may be scheduled as follows :—

	Bootham.	Micklegate.	Walmgate.	Total.
ACCIDENT :—				
Drowning	1	1	1	3
Falls	1	0	3	4
Burns and Scalds	1	3	0	4
Killed on Railway	0	1	0	1
Suffocation (overlaid)... ..	2	0	2	4
Knocked down by cart or cab	0	1	2	3
Killed by Motor Car	1	0	0	1
Poisoning	0	1	0	1
Choked	0	0	1	1
During Surgical operation	0	0	1	1

SUICIDE :—		Bootham.	Micklegate.	Walmgate.	Total.
Cut Throat	... ..	1	2	0	3
Drowning	... ..	0	1	1	2
Hanging	... ..	0	0	1	1
Poisoning	... ..	0	0	1	1
Shooting	... ..	0	0	1	1
		7	10	14	31

There was one infanticide, by drowning, of a child in Walmgate District ; the mother committed suicide by drowning.

During 1902 there were 4 uncertified deaths ; 2 in Bootham District, 1 in Micklegate District, and 1 in Walmgate District.

In Table IV., “other Septic Diseases” includes :—Phagadœna, Pyæmia, Septicæmia, Infective Endocarditis, other allied diseases (Cancrum Oris, Noma, Stomatitis, Phlegmom, Carbuncle, Cellulitis, Emphysematous, Gangrene).

“Puerperal Fever” includes :—Puerperal Pyæmia, Puerperal Septicæmia, Puerperal Sapræmia, Puerperal Pelvic Peritonitis, Puerperal Peri or Endo, Metritis.

“Obstruction of Intestines includes :—Hernia, Ileus, Intussusception, Strangulation, Stricture, Volvulus.

“Accidents and diseases of Parturition” includes :—Abortion (Non-Septic), Mania, Convulsions (Nephritis or Uræmia), Thrombosis (White Leg, sudden death in Puerperium), Extra-Uterine Pregnancy, obsterical operations.

Fever Hospital.

The following cases of Infectious Disease were admitted into the Corporation Fever Hospital during the year :—

From Bootham Sub-Registration District—

43 Cases of Scarlet Fever.	}	48.
2 „ Typhoid Fever.		
2 „ Small-pox.		
1 Case of Diphtheria		

From Micklegate Sub-Registration District—

43 Cases of Scarlet Fever.	}	47.
3 „ Typhoid Fever.		
1 Case of Small-pox.		

From Walmgate Sub-Registration District—

51 Cases of Scarlet Fever.	}	56.
3 „ Typhoid Fever.		
2 „ Diphtheria.		

From Flaxton Rural District—

9 Cases of Scarlet Fever.

From Escrick Rural District—

13 Cases of Scarlet Fever.

From Bishopthorpe Rural District—

5 Cases of Scarlet Fever.

In all, 178 Cases were received into the Fever Hospital during the year 1902 (151 City Cases and 27 Rural Cases) as follows :—

164 Cases of Scarlet Fever.	}	City Cases, 137.
		Rural Cases, 27.

8 Cases of Typhoid Fever, all City Cases.

3 Cases of Small-pox, all City Cases.

3 Cases of Diphtheria, all City Cases.

In 30 of the cases, the cost of maintenance in Hospital was borne, partially or entirely, by the patients or their guardians, and they were attended by their own medical attendants; with 148, the cost was borne by the Boards of Guardians, City or Rural, and the cases were attended by Dr. Angove, Flaxton District Poor Law Medical Officer.

During the year there were three deaths from Scarlet Fever, one from Smallpox, one from Diphtheria, and two from Typhoid Fever.

Thanks to the generosity of many kind friends, the children isolated in Hospital at Christmas enjoyed a well-laden Christmas Tree, with numerous gifts and Toys. During the year numerous other gifts of toys, books, pictures, &c., were received from kind friends in the city.

During the spring the Lodge and the Discharging Block were completed at a total cost of £622, and on the first of June a married porter took up his residence at the Lodge (George Jackson).

During the latter part of the year a large portion of the external drainage of the Hospital was re-constructed, the system having become persistently defective.

New Fire Apparatus was provided, viz., a hydrant on the town main at the gates, a metropolitan fire extinguisher for each pavilion and for the administrative block, fire buckets for each pavilion, and a fire pump with hose.

Slop-sinks with flushing cisterns were added to the Typhoid Pavilion, and an extra door was made at the end of each Pavilion.

The cost of maintenance for patients and staff in Hospital varied from 4s. 3d. to 6s. 6d. per week.

The Staff now consists, usually, of matron, one charge nurse, and four probationer nurses; also cook, laundress, housemaid, and porter. When the Hospital is in full use for both Scarlet and Typhoid Fever nursing, one more charge nurse, a night charge nurse, and a wardmaid are required.

Probationer nurses are engaged for Fever training, and to these I gave during the year a series of lectures on elementary anatomy and physiology and on fever nursing.

Four probationers "signed-on" for an inclusive term of two years' service—salary £15 to £18 a year with indoor uniform. All the female members of the staff are provided with indoor uniform in addition to salary. No outdoor uniform is provided or required. Our first "signed-on" probationers are Lydia Patterson, Catherine Aitken, Catherine Jamieson, and Florence Beer.

During the year the Hospital garden was much improved by the new Porter.

CASES OF INFECTIOUS DISEASE RECEIVED INTO CITY FEVER HOSPITAL.

Year.	SCARLET FEVER.					TYPHOID FEVER.				SMALLPOX.	
	Cases Notified.	Cases received into Fever Hospital.	Cases declined for want of Accommodation	Rural District cases received into Fever Hospital.	Cases Notified.	Cases received into Fever Hospital.	Cases re-ceived into County Hospital.	Cases declined for want of Accommodation.	Cases Notified.	Cases re-ceived into Fever Hospital.	
1891	98	19	...	...	119	4	...	...	...	...
1892	109	18	...	...	179	1	...	...	2	2
1893	156	6	...	...	287	...	69	...	72	71
1894	108	17	...	...	95	...	30	...	3	3
1895	138	32	...	...	180	...	53	...	...	...
1896	194	62	...	...	101	...	34	...	...	...
1897	270	96 (35½) <small>Per cent.</small>	...	...	106	...	36	...	...	...
1898	364	133 (36½)	about 50 per cent	11	132	...	48	about 20 per cent	4	3	
1899	200	105 (52½)	...	12	134	7	23	do.	2	2	
1900	325	167 (51½)	40 do.	8	244	25	49	do.	...	...
1901	262	128 (49)	20 do.	12	121	26	27	do.	1	2	
1902	279	137 (49)	30 do.	27	60	8	12	nil	3	3	

In 1900 Three cases of German Measles were received into fever Hospital from City.
Two cases of Diphtheria were received into Hospital between January, 1898, and December, 1901. Three cases were received in 1902.

In 1901 One Rural case of Typhoid Fever was received into Fever Hospital.

Extension of the Fever Hospital.

More accommodation for Scarlet Fever, Diphtheria, doubtful and complicated cases is greatly needed. A small field of over two acres next to the Hospital was purchased for £400. Negotiations for the purchase of other land adjoining the present Fever Hospital are still in progress. A Local Government Board Inquiry, to sanction the loan of the purchase money, was held in *September, 1902*, but further negotiations consequent thereupon are not yet completed.

The "Bungalow" Suspect Hospital.

During the latter part of the year 1901 the extensive epidemic of Small-pox in the metropolis called attention to the need for safer and more adequate provision—far away from the present Hospital—for suspected cases of this disease, and for plague, or any other less frequent but more serious infectious disease. In November, a small site of about three acres, on the Huntington Road, was purchased for £425. Upon the site a small "Suspect" Hospital, capable of accommodating six cases (in two wards), nurses, and caretaker, was built of permanent materials at a cost of £1,089. It is a substantial and comfortable building, and comprises bathroom, lavatory, store-room, wash-house, etc., in addition to two wards, two bedrooms, dining-room, and kitchen.

The Hospital is over a mile away from the present Hospital, and there are only 18 inhabitants within a circle of half a mile. A resident caretaker is in charge, and Nurses are supplied from the Fever Hospital to nurse cases sent in.

Pathways, roadways, iron fence, rain-water tank, and pump cost £100.

To this Building an additional ward-building has been added (March, 1903) in consequence of the extensive prevalence of Small-pox in the Northern Counties, especially in the neighbouring West Riding. This was built in four weeks at a cost of £531. It consists of a large ward and a small private ward (for cases dying, etc.), and will accommodate 14 patients. It is built of brick, colourwashed on the inside (no plaster work), roofed with slate, and floored with wood raised a few inches above the concrete basement, the interspace being freely ventilated. Free ventilation of all the wards is provided for.

The whole Hospital is warmed by ordinary coal fires, lighted with gas, supplied with water from the mains of the Waterworks Company, and provided with earth-closets.

St. George's Public Baths.

These baths, the property of the Corporation, were taken over to be managed by the Corporation in 1901.

Special facilities were given to the Elementary Schools for bathing and swimming by scholars.

Over 15,700 used the first-class baths during the year 1902, and 10,840 the second-class baths. Total receipts, £425.

The Yearsley Swimming Bath (in the River Foss) was repaired and cleansed and the banks re-piled.

Situation of the City.

The surface soil of York is very diversified in character. It is described by Mr. H. M. Platnauer, Secretary of the Yorkshire Philosophical Society, as consisting of boulder clay, with strips of warp, river sand and gravels along the river, whilst here and there (*e.g.*, Bishopthorpe and Heslington) occur ridges of glacial gravel, or shallow basins or pockets of dark peaty soil, the remains probably of shallow meres and swamps which have dried up or have been artificially drained.

The City is situated in the centre of the Great Plain of York, and its level varies from 25 to 53 feet above ordnance datum.

The climate is relaxing on the whole, especially during Summer and Autumn; during Spring it is often bleak, owing to the prevalence of east or north-east winds. A marked defect in the climate is the want of interchange of air between hill and dale, there being no hills of appreciable height nearer than 12 miles away.

In still weather the air in the old narrow streets and courts becomes very stagnant, but many of the newer streets are wide and spacious as the streets in such a climate ought to be.

The Water-supply of the City.

The water supply is in the hands of a private Company—the York Waterworks Company.

The water is drawn from the River Ouse at a point about a mile above the centre of the City. The Ouse is a free flowing river of great volume, with a water-shed area above York of about 1,200 square miles (including its tributaries the Swale, Ure, and Nidd).

The average daily flow of the river past the intakes is said to be about 140 million gallons per day. The sources of the river are in the mountainous and moorland districts of North-west Yorkshire. The waters are derived from or pass through oolite, lias, new red sandstone, magnesian limestone, lower red sandstone, millstone grit, Yoredale rocks, and mountain limestone.

Great care is taken in the purification of the water at the Waterworks ; the process consisting of (1) screening, (2) settlement in subsiding reservoirs, (3) rough filtration through "American" filters containing 4 feet depth of quartz sand, (4) and then it is passed through the "slow" or "English" sand filter beds containing $4\frac{1}{2}$ feet depth of fine river sand. As the supply of water is practically unlimited very thorough and frequent washing of the filtering area is carried out. By the above process the river-water bacteria are reduced in number by 99 per cent. The number of colonies in the filtered water never exceeds 10 colonies per cubic centimetre (the average is stated to be 3.3) ; water containing not more than 100 colonies per cubic centimetre is considered by water analysts as "very pure water."

Analytical and bacteriological observations are taken by the Company constantly, and with, I believe, quite satisfactory results.

Not within my knowledge has any illness in the City been traceable to the Company's water-supply as a cause.

The supply is constant, and at a pressure of 60 lbs. to the square inch. The consumption is equal to about 34 gallons per head per day, eight gallons for trade purposes, 26 gallons for domestic supply. Water is supplied free of charge to the Corporation for flushing drains, watering streets, and other public purposes. The consumption is increasing greatly, owing to the growth of the City, the increase of supply to Cottages within the City, the increase in the number of house-baths and water-closets.

The following is a fair sample analysis of the City tap-water taken during the summer months and carefully analysed in my own laboratory :—

Appearance clear, with slight yellowish tinge
(due to clay or peat),
free from odour— slightly alkaline.

	Grains per gallon.	Parts per 100,000.
Total solids	19.95	28.5
Free Ammonia	0.0017	0.0024
Albuminoid Ammonia	0.0051	0.0073
Chlorine	1.3	1.8
Oxygen absorbed in four hours at 80° F.	0.106	0.151
Nitrogen as Nitrates	nil	nil

Number of bacterial colonies per cubic centimetre after }
 four days incubation at 20° C. } 7

The Average total hardness during the year is 10 } Temporary, 8 grains
 degrees (Clark) or 10 grains per gallon. } Permanent, 2 ,,

There are a few surface wells still existent in the City, but they are diminishing in number, as they are usually found to be polluted or subject to pollution. They are usually closed by the owners, voluntarily, when found to be polluted.

Water-supply in Houses.

During the year special attention was directed to the question of the sufficiency of the water-supply in the City working-class houses.

It was estimated that the number of houses and tenements in the City which have no water-supply inside the house is 1,302.

These houses are supplied with water by one or more taps fixed in the various yards and courts, and in a large number of cases the taps are only six or seven yards from the dwellings. The supply of water in all cases is constant and unlimited.

It appears that some 20 years ago taps were being fixed inside a large number of cottages in the City by the York Waterworks Company, but the system was objected to by the then Medical Officer of Health, the late Mr. S. W. North, as setting up nuisance in the many houses where there was no sink, and where droppings from the tap would cause dampness in walls and floors, and so the action was stopped and hence, largely, the present position of over 1,300 houses.

Personally, I sympathise with Mr. North's fear. I am of opinion that every house should have a separate tap inside the house, but that the tap should be over a sink with proper waste pipe.

Under the Public Health Act, 1875 (Section 62), the duty of reporting upon insufficient water-supply devolves upon the Surveyor of the Sanitary Authority, and it rests entirely with the Sanitary Authority to say what is a sufficient or "proper" water supply.

Neither the Act nor the Local Government Board prescribe a standard.

It is the opinion of the Surveyor that every house should have a separate water-supply inside the house, but it has been resolved by the Committee to deal with each case on its merits, increasing the supply so that there shall not be more than six or seven houses to each tap in courts and

alleys, the tap to be within easy reach of all. To place a tap in every house was, in many cases, considered by the Health Committee to be impracticable or undesirable, and they

RESOLVED :—

“That in the opinion of this Committee it is desirable that a water tap should be placed in every house unless the circumstances of any individual case render such a course undesirable.”

During the year 1902, 413 houses were reported to the Surveyor by the Medical Officer of Health and Inspector of Nuisances, with regard to this question, and notices were served increasing the supply to over 30 houses. This work will be prosecuted more extensively during 1903.

By far the worst case in 1902 was an isolated colony of houses, in three blocks, on Hob Moor. There was only one tap for 18 houses and some of these houses were over 100 yards from the tap, and the houses were very openly situated. Notice was served on the owners to provide a separate tap to every house.

Polluted Streams.

Action was taken in regard to :—

- (1) The pollution of Holgate Beck by Acomb Sewage Farm. (New Sewage Works are now in progress at Acomb).
- (2) The pollution of Clementhorpe Beck by overflow of fruit and sweet refuse from the York Confectionery Co.'s Works. The Company was required to cease the pollution and to cleanse and flush the whole polluted portion of the Beck.
- (3) The pollution of the River Foss and of Yearsley Baths by waste-waters from 18 cottages in Flaxton Rural District.

Excrement and Refuse Disposal.

The methods in vogue in the City consist of :—

- (1) About 6,000 midden-privies, the contents of which are removed systematically about once a month by and at the cost of the Corporation. The manure is sold to farmers, part being forwarded from the City by rail.

The cost of collection is about £3,650 per annum ; revenue from sale about £500.

The midden-privies are diminishing in number, I am glad to say, for they are mostly unsatisfactory.

- (2) About 11,000 water-closets, of which 2,300 are waste-water closets. The provision of the latter is now discouraged, however, as in so many cases they prove to be nuisances, for want of cleansing, or through the deposit of improper substances—coals, old clothes, boots, bottles, &c. Every effort is being made to encourage the provision of water-closets of the wash-down or short hopper type.
- (3) Less than a score pail or tub closets, the contents of which are emptied by and disposed of to farmers or gardeners by the owners or occupiers.
- (4) Several thousand dry ashpits and galvanised-iron receptacles (or ashbins), in use at houses where there are water-closets and no midden-privies. The contents of these are collected by our scavengers twice a week (at a cost of £1,000) and destroyed in a Manlove & Alliott's Refuse Destructor (of 4 cells) which consumes about 36 tons of refuse per day and produces about 15 tons of clinker per day.

Measures are being taken under Section 36 of the Public Health Act, to secure the provision of proper iron ashbins, with covers, in lieu of wooden boxes, old tins, and other leaky and lidless receptacles at present largely used by occupiers to the production of nuisance and of danger to health.

Foul midden-privies are now being largely abolished under the same section of the Public Health Act.

At the beginning of the year the Refuse Destructor was taken over from the Contractors (Messrs. Manlove, Alliott & Co.), after one year of trial, and is now worked by Corporation employees. It is capable of destroying 40 tons of household refuse per 24 hours.

The steam generated is used to drive the stonebreaker and the mortar mill.

During the year 1902, 11,305 loads (9,938 tons) of refuse were delivered to and destroyed by the Destructor. There were 76,292 emptyings of midden privies and 7,204 loads of nightsoil were removed thereby. There was a great increase in the amount of street and gully cleansing done.

Although the abolition of such has been going on for some years past, in favour of water-closets and iron ashbins, the City Surveyor reported 305 midden-privies still existing where, there being no back or side roads to the houses, the contents had to be removed through the houses; 90 were reported as very wet and deep; and 37 as being without roof.

These are all being rapidly abolished.

Notices were issued during the year warning occupiers against casting coals, ashes, and other foreign bodies into water-closets.

Streets, back-roads, and sewer ventilators reported to the City Surveyor as requiring attention :—

Unpaved or imperfectly paved streets	...	...	...	8
„ „ „ back-roads	...	...	...	16
Sewer ventilators causing nuisance	...	...	...	2

The following important sewers were reconstructed during the year :—

In Asylum Lane, Union Terrace, Arthur Street, Black Horse Passage, East Parade (Heworth), and King Street.

A number of street gullies were re-laid, and several new ventilation shafts to sewers were constructed.

Housing of the Working Classes Act, 1890.

Houses declared unfit for habitation by the Medical Officer of Health during the year 1902 :—

Nos. 13 and 15, Marygate ; very small and ill-ventilated back to back houses, built by squatters against the Abbey Wall. No. 13 demolished per gift of the owners, the overseers of the Parish of York ; No. 15 purchased by the Corporation for £115 and demolished.

Nos. 16 and 17, Marygate ; similar to 13 and 15 ; closed, purchased by Corporation for £160 and demolished.

Hickton's Court, North Street, nine back to back cottages, damp and dilapidated, with defective drainage. Drainage reconstructed, houses repaired, and yard repaved.

House in Vicar's field, Layerthorpe, damp and dilapidated ; repaired and improved by owners.

House in Newgate, dirty and dilapidated ; repaired and cleansed by owner.

No. 7, St. John's Place, Haver Lane, damp and dilapidated ; still in hand.

St. Lawrence Court, five houses, damp ; work in progress.

Grape Lane, two tenements, dark, damp, ill-ventilated ; closed by owner.

House in Allan's Yard, Hope Street, dirty and dilapidated ; cleansed and repaired.

Three cottages behind White House, North Street, dark, damp, ill-ventilated dilapidated ; closed by magistrates' order.

Three tenements behind Cundall's Buildings, Skeldergate, dark and ill-ventilated ; closed by magistrates' order. Further proceedings now pending.

Six tenements in Beedham's Court, Skeldergate, small, dark, damp, ill-ventilated, overcrowded. Closed by magistrates' order.

No. 105, Layerthorpe, damp and dilapidated ; voluntarily closed by owners.

Further proceedings in connection with houses dealt with under the Act :—

House in Straker's passage, Fossgate, previously closed by owners ; purchased and demolished by Corporation.

No. 22, Trinity Lane ; greatly improved by owner.

Amongst Street Improvements in 1902, the most important was that in Coppergate.

Progress was made in negotiations for the widening of Nessgate and College Street.

During the year the following small **New Houses** were built in the City :—

Probable Rentals.		East side of River.		West side of River.		Totals.	
£13 or under	...	99	...	31	...	130	} Total. 338
£14 to £18	...	97	...	97	...	194	
£18 to £25	...	12	...	2	...	14	

The chief building has been on South Bank and Nunthorpe Estates, Poppleton Road, and Acomb Road ; Hull Road, Huntington Road, and Burton Lane.

It is satisfactory to observe that not one new privy-midden was erected during the year.

The housing question is not a vast one in York, but still it is one to cause some anxiety. To see many of our poorer residents better housed is very desirable. That many live in far worse conditions in other towns concern us but little. Why should not York be a pioneer, a model, a community rejoicing in its good health and healthful conditions? Conditions

of climate and soil tend to make York unhealthy unless these conditions be counteracted. Our populations should live with a freedom of open space, air, and daylight around them. Our poorer classes consist of:—

- (a) Those too poor to afford more than very low rents—1s. 6d. to 3s. per week.
- (b) Those who could afford better homes in less crowded situations, but they waste their earnings in drink, gambling, or idleness, or through ignorance and mismanagement.
- (c) Those who could afford better homes but who will live in the centre, have no ambition to live in better surroundings, are negligent of health and bright surroundings.

Class (a) form a serious problem—for they tend to crowd into old houses split up into unsatisfactory tenements, or into cheap back to back houses, or to become lodgers in already full houses.

Class (b) are rather a hopeless lot, one specially requiring education and social and temperance reformation.

What is required, I think, in the direction of cure of our housing conditions is:—

- (1) The building of really good, through commodious dwellings in the suburbs for our best working-class population—either by the Corporation or by philanthropic agencies, who would be content with a moderate return.
- (2) A better tram or other mode of transit between the suburbs and the centre.
- (3) To promote the flow of the better working classes into the suburbs, and the spreading out of the poorer classes amongst the older cottages in the centre—in other words we want to get, say, some of the Groves people into the outlying suburbs, and Hungate and Walmgate into the Groves. We must get the central people more out of the centre,—we must stop crowding into the centre.
- (4) For many of the poorer classes, more particularly for single persons and couples, pensioners, &c., we require tenement blocks, constructed upon model sanitary lines, owned by or controlled by the Corporation. I must say that I think there is much to be said in favour of such blocks being built by, owned by, and so strictly supervised by, the Sanitary Authority.

The ideal is a separate through dwellinghouse for every householder, and more especially for every family containing young persons. Tenements are not proper residences for children. But there are many cases---single persons, pensioners, widow and daughter, widow and two young children, &c., just 2 or 3 in household—for whom a separate house is unnecessary and too expensive. These people constitute an important and difficult feature in the housing problem, and under present economic conditions, model one or two-roomed tenements are required for them.

At present these people are found huddled together in dilapidated quarters in decaying old city mansions—in other words, in conditions neither sanitary nor comfortable, but often extremely pitiable.

I think the time has arrived when the York Corporation should adopt Part 3 of the Housing of the Working Classes Act, which enables a Sanitary Authority to build workmen's dwellings or tenements.

In this connection it is lamentable to have to note the numerous difficulties placed before Sanitary Authorities by the Housing of the Working Classes Act, 1890, and in the obtaining of stronger powers for improving the arrangements in new houses in Corporation Acts.

In 1900 Brighton was refused powers by Parliament for prescribing a minimum cubic space in the rooms of cottages, and in 1902 we had the greatest difficulty in obtaining powers to prescribe a minimum floor space (see notes on York Corporation Act, 1902).

The Factory and Workshop Act, 1901.

On the 1st January, 1902, this Act, which consolidates and extends all previous Acts of the kind, came into operation, and early in the year I reported to the Corporation on its chief provisions (see Minutes page 316).

This Act is complex and its duties multifarious, and it increased the duties of our Department so considerably that an additional Sanitary Inspector was added to the Staff. But illness and changes in the staff greatly hindered our full administration of the Act during 1902.

The heaviest new duties imposed upon Sanitary Departments by the Act were :—(1) the registration of all kinds of workshops, and the more complete inspection thereof ; (2) the inspection of "Workplaces," viz. : restaurant kitchens, stable-yards, and other places not coming within the category of workshops ; (3) the inspection of the homes of homeworkers ; (4) increased regulations *re* bakehouses.

Public attention was called in the newspapers and by circulars to the registering of workshops and the notification of homeworkers by employers. During the year 1902, 480 workshops were registered and the names of 106 outworkers (or homeworkers) were received.

During the year 1903 the register of workshops will be completed and the total number of workshops in the City will probably then number nearer 600.

(H.M. Inspector of Factories has informed me that there are about 160 Factories (not workshops) in York).

On the whole the workshops, retail bakehouses, &c., were found to be in a satisfactory condition. Below is a tabular statement of improvement work ordered and carried out during the year. No legal proceedings had to be instituted. No action had to be taken with regard to "workplaces."

There are seven **underground bakehouses** in the City, some of which are unsatisfactory, and will have to be dealt with before the end of 1903, according to the following provision of the Act :—

"After the first day of January, 1904, an underground bakehouse shall not be used unless certified by the District Council to be suitable for that purpose."

The following is a Summary of the work carried out during the year 1902 under the Act :—

Number of Workshops entered on New Register	...	480
These included :—		
Tenement Workshops	... ..	6
Domestic Workshops	... ..	32
Retail Bakehouses	... ..	67
Laundries	... ..	4
Other Workshops	... ..	371
Number of "Workplaces" (not included in above total)		11
Number of Domestic factories	... ..	0
Number of lists of Outworkers received	... ..	43

(representing 28 Employers and 106 outworkers, all of whom are engaged in making wearing apparel).

Workshops and Domestic Workshops:—

Number inspected	... ..	215
Number of inspections made	... ..	303
Notices served under Public Health Acts <i>re</i> Sanitary defects	... ..	31

Sanitary arrangements improved at ...	...	...	...	25
Number of notices to cleanse and limewash	...	...	...	42
Number of notices to abate overcrowding	...	...	...	2
Number of notices to improve ventilation	...	...	...	1
,, to provide means of ventilation (Sec. 7)	...	...	...	nil.
,, <i>re</i> wet floors (Sec. 8)	...	...	...	nil.
Legal proceedings taken	...	...	...	nil.

Retail Bakehouses (67 in number) :—

Number inspected	...	...	...	...	...	47
Notices served as to closets	...	...	...	...	...	0
,, as to water-cisterns	...	...	...	...	...	0
,, to remove drain openings <i>re</i>	...	...	...	...	...	10
,, to limewash	...	...	...	...	...	12
Number of bakehouses dealt with as sanitarily unfit	...	...	...	...	...	0
Legal proceedings taken	...	...	...	...	...	nil.

Workplaces (restaurant kitchens, stables, &c.) :—

Number inspected	...	...	...	...	...	11
Notices or other action taken...	...	...	...	...	...	nil.

Sanitary Conveniences in Workshops:—

Closets were insufficient or unsuitable at	...	...	...	6
There were not closets separate for the sexes at	...	...	...	2

These were dealt with under Section 22 of the Public Health Acts Amendment Act, 1890, which was adopted by York Corporation, April 4th, 1892.

Homework (Sections 107 to 115) :—

Number of Outworker's premises inspected	...	...	...	36
Number found unwholesome and occupiers ordered to cleanse	...	...	...	11
Work was stopped because of the prevalence of infectious disease (<i>viz.</i> , Scarlet fever) <i>vide</i> section 110	...	...	...	1

No sanitary defects were reported to the York Sanitary Authority by H.M. Inspector of Factories during 1902.

Forty-one Infringements of the Act were reported by me to H.M. Inspector of Factories, under section 133.

Full details of the Workshops and of our Inspections were placed upon record, in accordance with the Act.

I reported on the administration of the Act in York during 1902 to the Home Secretary, in accordance with the Act, on May 1st, 1903.

The undermentioned trades were carried on in the Workshops inspected :—

Trades.	Number inspected.
Mantlemaking	2
Dressmaking	34
Baking	47
Millinery	21
Tailoring... ..	30
Paper Bag making	1
Saddlers	9
Painter	1
Jam Making	1
Whitesmiths	2
Blacksmiths	2
Rag and Paper Sorting	1
Bottling	1
Dyeing	2
Plumbing	7
Weighing Machine Making	1
Watch Making	5
Boot Making	19
Joinery	6
Picture Framing	2
Marble Mason	1
Tinsmiths	4
Wheelwrights	3
Malting	1
Upholsterer	1
Shoeing Smith	1
Shirt Making	2
Stocking Knitting	1
Mason	1
Photography	1
Cycle Making	1
Corset Making	1
Mackintosh Making	1
Book Binding	1
Laundry	1
Total number	215

York Corporation Act, 1902.

The first portion of the York Corporation Bill, 1902, provided for the purchase of existing tramways and for the extension thereof into other suburbs. From the housing point of view, it is much to be regretted that this part of the Bill was rejected by the poll of the ratepayers.

Certain street improvements which would have been consequent upon the adoption of the tramway scheme were also rejected at the poll.

It is also to be regretted that Clauses empowering the Corporation to require Water Closets in new buildings and in existing buildings, under certain conditions, were withdrawn from the Bill by the Corporation, under the expectation of strong opposition.

There was an actual majority (20 to 6) in favour of empowering the Corporation to require Water Closets in new buildings and in existing buildings, or in new buildings only, but this was not a sufficient majority to satisfy the requirements of the Act regulating Corporation Bills, and therefore these clauses had to be dropped.

Powers were refused by Parliament on the following points :—

- (1) For the regulation of the height of buildings.
- (2) For the provision of a penalty on owners allowing dwelling-houses without proper and sufficient water-supply to be occupied.
- (3) For the provision of a penalty on owners of dwelling-houses failing to comply with notice to provide sufficient Water-Closet, Earth-closet, or privy and ashpit.
- (4) For the authorising of the use of hydraulic drain tests.
- (5) To compel persons outside the City, sending children to School in the City, to notify Infectious disease in their households to the City Medical Officer of Health.
- (6) To better define effectual isolation as referred to in section 124 of the Public Health Act, 1875.
- (7) to penalise original vendor for sending or depositing diseased food for sale, even if he tried to escape loss by selling to a retailer.
- (8) to increase the penalty on smoke nuisance to £50, and the daily penalty to £10.

Space forbids me to quote in full, as one would like to do, *the Clauses enacted*. Amongst the most important and useful sanitary provisions of the Act the following may be epitomised :—

Streets and Buildings.

The Corporation have power to prevent the formation of *culs-de-sac* if it is expedient to do so, unless the person laying out a new street can show that it is impossible to comply with the conditions of the Corporation. *Culs-de-sac* are notoriously ill-ventilated and unhealthy.

One of the most important clauses is that dealing with the area of habitable rooms, which is as follows :—

- (1) Every new dwelling-house shall be provided with at least one living room with a floor area of not less than 115 square feet, and one bedroom with a floor area of not less than 110 square feet.
- (2) No bedroom or habitable room in any such dwelling-house shall have less floor area than 70 square feet.
- (3) Any person who shall offend against this section shall be liable to a penalty not exceeding £5, and to a daily penalty not exceeding 20s.

It had become very necessary to provide minimum dimensions for the size of rooms in new dwelling-houses and to safeguard the public from the mere building speculator.

Owing to inadequate powers, numerous Cottages had been recently built in the City (mere rabbit hutches) which are already overcrowded with occupants owing to the limited floor space.

Already we had power by Bye-law to prescribe a minimum height for rooms, but what was found to be required was power to prescribe a minimum floor space. The want of this power has already caused considerable mischief, and I am afraid that what will prove to be no better than new slums have been produced to an alarming extent. The City Engineer and I gave a considerable amount of evidence on this clause, which was strongly opposed by the Local Government Board, much to our surprise. We therefore had to fight for the clause, and York is to be greatly congratulated upon having such a clause in the Act.

The Corporation may make bye-laws with respect to water-closets and waste-water closets and may by means of such bye-laws prescribe the description, nature, size, materials, position and level thereof, and of the apparatus and the manner of flushing the same, and the means to be provided for protecting the same from frost.

Another section penalises the person who improperly constructs or repairs a water-closet or drain.

The Corporation may order several houses to be drained by a combined drain.

The Corporation are empowered compulsorily to test drains *suspected to be defective*. The existence of an actual nuisance as implied under section 41, Public Health Act, 1875, is not here necessary.

No rain-water down-spout, etc., is allowed to be used to act as a drain ventilating shaft.

Persons who wilfully damage drains or water-closets are liable to a penalty of £5.

Special powers are given for filling up insanitary cesspools, ashpits or wells, when desirable for reasons of health.

Sanitary Matters.

In order to trace the distribution and to prevent the spread of infectious disease, the Corporation are empowered to require dairymen to furnish lists of their sources of milk supply; they may also require lists of customers from persons gaining a livelihood by the washing or mangling of clothes; and principals of schools to furnish lists of their pupils.

Dairymen must report cases of infectious disease occurring amongst their servants; persons suffering from infectious disease must not take part in any occupation connected with the preparation and sale of food; infected clothing must not be sent to a laundry without previous disinfection by the Corporation; and persons must not take out books from a lending library for use in an infected house; library books which have been infected must not be returned to the library until they have been disinfected by the Corporation.

The Medical Officer of Health has increased powers to prevent infected children attending school; to prevent a possible spread of infection by means of ice-creams, and in common lodging houses.

The Corporation may pay expenses of all persons, not paupers, isolated in Fever Hospital, and may compensate fever "contacts" for loss of employment.

The Corporation are empowered to place a whole household in quarantine (a very important power in the case of such a disease as small-pox or plague) until danger of spread of the disease is over, and they have increased powers with regard to the purification of filthy articles, foul drains, choked

streams, foul water cisterns, choked water-closets and drains, and other nuisances. Defective spouts, gutters, drains, cisterns, wells, cesspools, or deposits causing damp in an adjoining building are also to be deemed nuisances.

Very important powers are given to the Corporation to deal with animals suffering from tuberculosis of the udder, and with the milk from such animals supplied within the City, even with milk supplied from farms or dairies outside the City. The farmer or dairyman has a power of appeal, and other safeguards. There are penalties for selling milk of diseased cows and for failing to isolate and notify diseased cows.

Important powers have also been obtained by the Corporation whereby the keeper of a common lodging-house must be re-registered annually, must reside at the house himself, or provide a registered resident deputy, and must satisfy the Corporation of his character and fitness for the position.

Burial Grounds.

The following letter from the Local Government Board was received and read at a meeting of the Health Committee held on 1st May, 1902, viz. :—

Local Government Board, Whitehall, S.W.,

April, 1902.

To the Town Clerk, York.

SIR,

I am directed by the Local Government Board hereby to give you notice that it is their intention, after the expiration of ten days from the date hereof, to represent to His Majesty in Council that, for the protection of the public health, the opening of any new burial ground in the City of York, save with their previous approval, should be prohibited; and that except as hereinafter provided, burials should be discontinued forthwith and entirely in the Parish Church of St. Oswald, Fulford, and in the Churchyard after the 30th of September, 1902.

[Here followed certain exceptional provisions.]

I am, Sir, your obedient Servant,

NOEL T. KERSHAW, *Assistant Secretary.*

Butter.

An order of the Board of Agriculture was received prescribing that where the proportion of water in a sample of Butter exceeds 16 per cent., it shall be presumed for the purposes of the Sale of Food and Drugs Acts, 1875 to 1899, until the contrary is proved, that the Butter is not genuine by reason of the excessive amount of water therein.

The order was to come into force on the 15th May, 1902.

The Sanitary Institute Congress, 1902.

In September 1902, the Lord Mayor (Alderman Foster), the Chairman of the Health Committee (Alderman Border), the City Engineer and the Medical Officer of Health attended the very successful Congress at Manchester, as delegates of the York Corporation, and reported to the Council on the proceedings of the Congress at the November Council Meeting, the report being printed in full in the Health Committee's Minutes of October 16th.

A copy of the Sanitary Institute's published Transactions of the Congress was afterwards supplied to every Member of the Health Committee.

During the year:—

The Health Offices and Laboratory were re-painted throughout, and the drainage was reconstructed.

The Health Department commenced to obtain disinfectants by contract.

A smoke-testing machine ("Asphyxiator") was added to the apparatus of the Department.

The Steam-Disinfector cradle was re-galvanised.

Laboratory Work.

During the year 80 samples of sewage and effluents and four samples of drinking water have been analysed by the Medical Officer of Health; all the samples of water were *found to be polluted*. Sixteen specimens of sputum were examined for Tubercle Bacillus, 3 with positive result and 13 negative. As the Medical Officer of Health is liable to frequent and unavoidable interruptions, many of the sewage analyses have had to be repeated two, three, or four times, either because the experiments have been destroyed by the interruptions, or because the importance of the analyses of the effluents from the bacteriological experiments at Naburn Sewage Works necessitated the greatest possible accuracy being secured.

The Staff of the Health Department.

In May, 1902, it became absolutely necessary, in consequence of the great increase of work involved by the extensive sanitary improvements being carried out in the City and by the Factory and Workshops Act of 1901, to appoint an additional Assistant Inspector to supervise the re-construction and testing of drains in existing houses. An Inspector was therefore appointed for this Special work, at a commencing salary of £85 per annum.

The Staff consists of :—

The Medical Officer of Health.

The Inspector of Nuisances.

Four Assistant Inspectors of Nuisances.

Two Clerks.

Disinfecting Attendant.

Ambulance Driver.

Drain-testing Assistant.

also :— Public Analyst.

Veterinary Meat and Cattle Inspector.

Canal Boats Inspector.

The work of the Inspectors now consists chiefly of the following duties:—

Investigations of complaints of nuisances ; notes thereon, and notices to be drawn up and served for abatement.

Frequent inspection and reporting of 24 Common Lodging-houses ; serving of any notices consequent thereon.

Smoke nuisance observations, lasting often for hours.

Inspection and smoke-testing of all drains re-constructed by notice under the Public Health Act. Drawing of record plans thereof.

Inspection of foul privies, yards, &c. ; recording notes thereof, reporting the observations to the Chief Inspector, report by him to Committee, drawing-up and serving of notices, inspections (3 to 12 or more in number) to see the work properly carried out.

Inspections to see that various other kinds of sanitary work are carried out. Notices *re* water-supply, &c.

Inspections of premises where infectious diseases have occurred, serving of notices on the occupier, on the Clerk of the School Board, and on the School Managers or Headmasters.

Inspections of 84 Slaughterhouses, and serving of any notices consequent thereon. Inspection of meat slaughtered therein.

Inspections of Cowsheds, Dairies, and Milk Shops.

Inspection of Fish, Poultry, and Game Shops.

Inspections for unwholesome meat or other foods at the Markets and elsewhere.

Inspections for impure or insufficient water-supply.

Administration of Sale of Food and Drugs and Margarine Acts. Obtaining samples of butter, margarine, and other foods, and of drugs. Keeping register of wholesale dealers, despatching samples for analysis. (Recently the number of samples required to be obtained by the Board of Agriculture has been trebled).

Inspection and records of over 600 Workshops, and a large number of outworker's homes. Registration of these, with minute records of inspections; serving of notices consequent thereon.

Inspections, records, and registration of houses let in lodgings.

(Signed),

EDMUND M. SMITH, M.D., Edin., D.P.H., Camb.,
Medical Officer of Health.

REPORT OF THE INSPECTOR OF NUISANCES.

1902.

I have the honour to submit for your information a statement of Sanitary work carried out under Notices for the Abatement of Nuisances, &c., during the year 1902.

In the period named 3,062 houses and premises have been inspected, 984 of which were found to require sanitary improvements.

2,083 notices have been served on owners and occupiers to execute various sanitary works to remedy the defects found on the said premises.

It will be seen by the tabular statement :—

That during the year 223 privies have been converted into water closets and the ashpits in connection therewith abolished.

A considerable number of these premises had no back road, consequently the refuse had to be removed through the dwellinghouses.

The question of overcrowding has occupied a share of attention and supervision, and during the year 16 cases have been dealt with, in most of which the tenants have been required to remove to larger houses. In these cases the tenants have often a difficulty in obtaining suitable accommodation elsewhere.

In June 1902, Assistant Inspectors Drury and Darley resigned their situations in consequence of having been appointed to other situations elsewhere.

These changes unavoidably interfered somewhat with the progress of the work of the Health Department, as some weeks elapsed before the new men appointed commenced their duties, and being strangers to the City and not having had much previous experience as Sanitary Inspectors, it was several months before they became efficient in their duties.

The duties of the Health Department have been again considerably increased by the Factory and Workshop Act, 1901, and the York Corporation Act, 1902.

Common Lodging Houses.

On the whole these houses have been fairly well conducted during the year ; but some are not entirely satisfactory.

Several of the day rooms, being too small and imperfectly ventilated, will come under special consideration at an early date, as in future they have to be re-registered every year under the York Corporation Act, 1902.

In consequence of the prevalence of Small Pox in the West Riding the houses have frequently been visited during the day and enquiries made as to the occurrence of any cases of sickness.

The following new articles of bedding have been provided by the occupiers during the year, viz. :—

- 19 new mattresses,
- 8 new quilts, and
- 10 new bed ticks.

Slaughter-houses.

There are 83 private Slaughter-houses in the City ; several of these are by no means satisfactory in construction, and the situation of many is unsatisfactory, being closely surrounded by dwellinghouses and other buildings.

The number is gradually declining and an improved condition of the Slaughter-houses is coming about gradually.

Since 1896 16 Slaughter-houses have been abolished, and no new licence has been granted since 1897.

Plans for one new Slaughter-house in Layerthorpe were disapproved in 1902.

Cowsheds.

There are 76 Cowsheds in the City and 64 Cow-keepers.

During recent years several excellent new Cowsheds have been erected, and a steady improvement is taking place all round.

There is still room for improvements, however, in some of the buildings and in the general cleanliness of the cows and milking.

Offensive Trades.

The only matter calling for comment during 1902 is that several attempts were made by one applicant for a licence for a tripe boiling establishment within the City, but he was repeatedly refused.

Report of the Inspector of Nuisances on Sanitary Work carried out under Notice during the year 1902 :—

Number of Inspections made	3062
Number of premises which required Sanitary Improvement	984
Houses without sufficient Sanitary accommodation	243
Number of houses inspected, and Reports made to the Medical Officer of Health, where cases of Infectious Diseases have occurred	344
Notifications of Infectious Disease sent to the Head Teachers of Schools	333
Notifications sent to the Clerk of the School Board	202
Number of Notices served	2083

Description of Work carried out.

Privies :—

Converted into Water-closets	223
Floors cemented	61
Walls cemented	61
Repaired	2
Limewashed	5
Abolished	6
Re-constructed and placed in more suitable positions ...	2

Ashpits :—

Abolished... ..	223
Floors laid with cement concrete	271
Repaired	9
Furnished with proper covering	14
Portable receptacles substituted	123
Re-constructed	1
Inside walls cemented	83

Drains :—

Constructed with stoneware pipes	290
Disconnected from main sewer	205
Ventilated	204
Waste pipes of sinks disconnected from drains	7

Drains under houses abolished	13
Stoneware syphon traps fixed under grates in yards	32
Waste pipes of sinks trapped or repaired	59
Cleansed or repaired	66
Urinals cleansed	2
Additional gullies fixed in yards	13
Cesspits abolished	17

Water Closets:—

Provided with a sufficient supply of water	11
Limewashed or cleansed	55
Additional provided	23
“ Wash Down ” Water Closets provided in lieu of “ Old Pan ” apparatus	5
Repaired	33
Soil pipes repaired	2
New flush pipes fixed	10
New cisterns fixed... ..	9

Houses :—

Cleansed and limewashed	52
Unfit for habitation ; Closed	17
Do. do. Improved... ..	15
Roofs, etc., repaired	30
Water Spouts fixed or repaired	84
Down Spouts disconnected from drain	131
Overcrowding abated	16
New sinks fixed	3
Accumulations of offensive refuse removed	61
Nuisances abated, arising from the keeping of swine, and other animals	28
To limewash Common Lodging Houses	46
Pavements of yards of dwelling-houses repaired	59
Yards repaved with cement concrete	68
Yards repaved with asphalt	12

Cowsheds (76):—

Visits of inspection made	315
Limewashed, or repaired and ventilated	130
New cowshed built	1
Closed, or discontinued as such, since January, 1902	6

Slaughter-houses (83) :—

Visits of inspection made	704
Limewashed, cleansed or repaired	338
Closed, or discontinued as such since January, 1902	1

Infectious Diseases:—

Patients removed to Hospitals in Ambulance...	...	...	188
Rooms disinfected	...	...	475
Articles disinfected by Steam Disinfector	6,511

Miscellaneous works not classified above	39
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Also, 413 houses have been reported to the City Surveyor with regard to the question of water-supply.

Smoke Observations.

Number of Chimneys of which observations were taken	...	11
Number of observations...	...	16
Number in which black smoke was emitted in such quantity as to be a nuisance, and the occupiers of the premises cautioned	...	6
Number of occupiers prosecuted	...	1

Sale of Food and Drugs Acts.

During the year 126 samples of Food and Drugs have been procured and submitted to the Public Analyst, who certified 119 samples genuine and 7 adulterated (*i.e.*, 5.5 per cent. were adulterated), viz. :—

- 4 samples of Coffee.
- 1 sample of Butter.
- 1 sample of Milk.
- 1 sample of Golden Syrup.

Description of Samples.	Number of Samples.
New Milk	48
Butter	28
Margarine	7
Cream	1
Lard	8
Jam	2
Treacle	1
Pepper	4
Ale	3
Coffee	4
Milk of Sulphur	2
Cheese	3
Yeast	1
Cocoa	1
Tea	2

Ground Ginger	...	...	...	...	...	...	...	2
Sweets	...	...	...	...	...	...	...	4
Golden Syrup	...	...	...	...	...	...	...	1
Gregory's Powder...	...	...	...	...	...	...	...	2
Malt Vinegar	...	...	...	...	...	...	...	2
Total								126

Prosecutions.

Nature of Offence.	Decision of Court.
Failing to obey an order made by Two Justices of the City of York to abate a nuisance arising from the emission of black smoke from a chimney	Fined 2/6 and costs for each of four days on which observations were taken.
Failing to obey a Justice's order to abate nuisances arising from privies and ashpits, viz., to convert privies into Water Closets and to disconnect and ventilate the drains	Fined 10/- and costs.
Failing to comply with an order of Sanitary Authority to abate nuisances arising from foul privies and ashpits, and for that purpose to abolish the ashpits, and convert the privies into water-closets	Order obtained to carry out the works ordered by Sanitary Authority within two months.
Selling sample of Coffee adulterated with 80 per cent. of Chicory... ..	Fined 10/- and costs.
Selling sample of Coffee adulterated with 44·28 per cent. of Chicory	Fined 2/6.
Selling sample of Coffee adulterated with 63·14 per cent. of Chicory	Dismissed.
Carcase of beast, affected with Tuberculosis, unfit for human food	Seized and Justices' Order obtained for its destruction. The owner was cautioned by the Town Clerk, by order of the Health Committee.

(Signed)

JONATHAN ATKINSON,

Inspector of Nuisances.

**Report of the Inspector under the Canal Boats Acts
(1877-1884) for 1902.**

Naburn Locks, York,
January 8th, 1903.

I have inspected 208 boats during the past year.

On 9 boats the cabins have been re-painted; 4 boats had no Certificate of Registration; and 1 Registration Certificate did not identify the owner with the boat. Upon the 208 boats I found 353 men, 53 women and 75 children.

The highest number of boats on the Register was 212. Out of this number 37 have been broken up, 16 registered with other authorities, 6 withdrawn, leaving 153 upon the Register. During the past year 3 new boats have been registered, and 3 Certificates granted on account of change of ownership.

The Government Inspector visited York on November 26th, 1902, and examined the books, and inspected some of the boats.

I remain, Gentlemen,

Your obedient Servant,

(Signed) THOMAS LEETHAM,

Inspector.

**Principal Sanitary Works carried out during
the last 30 years.**

I have also prepared, and herewith submit for your information, a statement of the principal sanitary works carried out for the abatement of nuisances, &c., during THE 30 YEARS ENDING DECEMBER 31ST, 1902.

It will be seen by this statement that a very large number of valuable and important sanitary improvements of various kinds have been carried out during the period named.

These improvements were in every district of the City, and they cannot fail to have an important influence for good on the health of the citizens.

This, in my opinion, is already evident by the improved death-rate of the City, which for 1902 was 15·3 per thousand.

For the ten years 1874 to 1883, inclusive, the average death-rate of this City was 21·6 per thousand; for the ten years 1884 to 1893 the average death-rate was 20·4; for the ten years 1893 to 1902, it was 17·9.

During the same period, over 600 houses and tenements have been closed and the majority demolished, most of which were in such a dilapidated and insanitary condition as to render them unfit for human habitation,

These houses and tenements have been closed, partly by action taken under the Housing of the Working Classes Act, 1890, partly by provisional orders obtained by the Corporation for street improvements, and a considerable number were closed and demolished by owners for business extensions and other purposes.

The 2,454 midden privies which have been converted into Water-closets, and ashpits in connection therewith abolished, were in most cases in close proximity to the houses and in a foul and offensive condition; their walls, built of common bricks of a highly porous character, were impregnated with the filth which had been deposited in them.

Their floors were sunk a considerable depth below the surface of the adjoining ground, and in most cases imperfectly paved with bad bricks, which admitted soakage into the soil below, rendering it wet, foul, and unwholesome.

The capacity of a great number of these ashpits was so large that when full they contained about two cart loads of refuse, which in most cases had to be removed through the houses, there being no back roads.

The noxious emanations arising from the putrefaction of these large accumulations of night soil in the small confined yards frequently pervaded the rooms of the houses to the danger of the occupiers.

About one-half of the Water-closets substituted for midden privies have been provided during the last seven years.

3,807 new stoneware-pipe drains have been constructed to dwelling-houses, 1,761 disconnected from main sewer, and 1,885 ventilated.

The drains on most of these premises were in a very defective condition; many were constructed of common clay pipes without joints. Some were constructed of bricks and others of common clay land pipes. In many cases they were permitting soakage into the soil, rendering it wet, foul, and unwholesome.

In 1,582 cases the rain-water down-spouts, found to be in direct communication with the sewers, have been disconnected therefrom. In many of these cases the joints of the pipes were open and the heads near to bedroom windows; consequently, sewer gas was frequently discharged from the said pipes close to the bedroom windows, to the danger of the occupants.

In 301 cases the sanitary accommodation in dwellinghouses was found to be insufficient for the proper accommodation of the occupiers. This deficiency has been rectified:—222 additional water-closets and 79 additional privies have been provided.

The additional privies were provided in the *early* part of the period named.

4,574 yards adjoining the dwellinghouses have been either cemented, asphalted, flagged, or repaired.

In my opinion this part of the Sanitary work has had an important influence for good on the health and comfort of the occupiers of the premises dealt with.

It is of the highest importance, for the health of the occupiers, that the space surrounding their houses should have an impervious pavement, to prevent as far as possible, pollution and dampness of the sub-soil and the walls and foundations of the buildings.

The 1,925 waste-pipes of sinks found in direct communication with the sewers were in most cases untrapped, and sewer gas was escaping into the houses to the danger of the health of the occupiers.

Cowsheds.

The sanitary condition (light, ventilation, drainage, &c.) of 61 Cowsheds has been improved.

10 new sheds have been built and provided with sufficient light, ventilation, and good drainage. 42 Cowsheds have been discontinued as such, most of which were in a defective sanitary condition, and unfit for the purpose of keeping dairy cattle therein.

Statement of Sanitary Works carried out for the abatement of Nuisances, etc., under notice DURING THE THIRTY YEARS ENDED DECEMBER 31ST, 1902.

Privies :—

Description of Works.	Number.
Converted into water-closets	2,454
Floors under seats laid with cement concrete	1,542
Walls cemented	620
Repaired	205
Limewashed (including water-closets)... ..	3,680
Reconstructed in more suitable positions	58
Box privies provided in lieu of middens	24
Additional provided	79
Abolished	29

Ashpits :—

Abolished	2,432
Furnished with coverings	1,051
Floors laid with cement concrete	2,520
Walls cemented	880
Ventilated	246
Repaired	829

Reconstructed in more suitable positions	...	...	...	...	...	160
Portable receptacles provided in lieu of ashpits	...	...	...	...	...	330
Additional provided	...	...	...	...	...	6

Drains :—

Constructed with stoneware pipes	...	...	...	...	...	3,807
Disconnected from main sewer	...	...	...	...	...	1,761
Ventilated	...	...	...	...	...	1,885
Waste pipes of sinks disconnected from drains	...	...	...	...	...	1,925
Waste pipes of sinks trapped	...	...	...	...	...	415
Waste pipes of sinks fixed	...	...	...	...	...	361
New sinks fixed inside houses...	...	...	...	...	...	37
Cleansed or repaired	...	...	...	...	...	2,693
Cesspits abolished	...	...	...	...	...	3,024
Stoneware syphon traps fixed in yards	...	...	...	...	...	3,788
Drains abolished	...	...	...	...	...	216
Additional gullies fixed in yards	...	...	...	...	...	431
Rain-water cisterns abolished	...	...	...	...	...	55

Yards :—

Repaved with cement concrete or blue tiles	...	...	...	...	...	947
Repaved with asphalt	...	...	...	...	...	1,476
Repaved with flags	...	...	...	...	...	122
Pavements repaired	...	...	...	...	...	2,029

Houses :—

Cleansed and limewashed	...	...	...	...	...	1,345
Roofs, &c., repaired	...	...	...	...	...	573
Overcrowding abated	...	...	...	...	...	124
Cleansed and disinfected	...	...	...	...	...	3,821
Supplied with water from Waterworks Company's mains	...	...	...	...	...	80
Waterspouts fixed or repaired	...	...	...	...	...	1,598
Downspouts disconnected from drains	...	...	...	...	...	1,582
Bath-wastes disconnected from drains	...	...	...	...	...	48
Bath-wastes ventilated	...	...	...	...	...	10
Urinals provided	...	...	...	...	...	38
Urinals cleansed or repaired	...	...	...	...	...	22
Accumulations of offensive refuse removed	...	...	...	...	...	5,675
Number of premises on which pigs, or other animals, so kept as to be a nuisance, were removed therefrom	...	...	...	...	...	630

Bakehouses :—

Limewashed	...	...	...	...	...	17
Drains inside abolished...	...	...	...	...	...	4

Cowsheds :—

Improved drains inside abolished, light and ventilation improved	61
Limewashed	1,440
Closed	42
New sheds built... ..	10
Overcrowding abated	12

Water-closets.

Properly supplied with water	786
Additional ones provided	222
Wash-out or Wash-down basins fixed in lieu of " Old Pan " apparatus	223
Repaired or new basins fixed	824
New flush pipes fixed	462
Cisterns provided	473
Reconstructed in more suitable situations	34
Ventilated	47
Soil pipes ventilated	225
Soil pipes re-fixed outside	36
Abolished	19

Slaughterhouses :—

Limewashed	1,306
Floors flagged, cemented, or repaired	125

Manure Pits :—

Cemented or repaired	63
Provided	38
Furnished with covering	41

Chimneys :—

Nuisances from smoke abated	94
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Common Lodging-houses :—

Limewashed	223
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Workshops :—

Limewashed	121
Sanitary conveniences provided	14

Miscellaneous :—

Not classified above	974
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(Signed)

JONATHAN ATKINSON,

Inspector of Nuisances.

LOCAL GOVERNMENT BOARD'S TABLE 1.
CITY OF YORK.

Whole District—1902 and Previous Years.

YEAR.	Population estimated to each Year. Middle of Revised on Census, 1901.	BIRTHS.		DEATHS UNDER ONE YEAR OF AGE.		DEATHS AT ALL AGES. TOTAL.		TOTAL DEATHS IN PUBLIC INSTITUTIONS IN DISTRICT.	Deaths of Non-residents registered in District. Public Inst.	Deaths of Residents registered beyond District in Public Inst.	DEATHS AT ALL AGES. NETT.	
		Number.	Rate*	Number.	Rate per 1,000 Births registered.	Number.	Rate*				Number.	Rate*
1	2	3	4	5	6	7	8	9	10	11	12	13
1892	67,807	2165	31.9	No records available.	No records available.	1423	20.9	No records available.	No records available.	No records available.	No records available.	No records available.
1893	69,388	2014	29.0	No records available.	No records available.	1385	19.9	No records available.	No records available.	No records available.	No records available.	No records available.
1894	70,392	2177	30.8	No records available.	No records available.	1231	17.4	No records available.	No records available.	No records available.	No records available.	No records available.
1895	71,396	2218	31.0	No records available.	No records available.	1372	19.2	No records available.	No records available.	No records available.	No records available.	No records available.
1896	72,500	2209	30.4	No records available.	No records available.	1295	17.8	No records available.	No records available.	No records available.	No records available.	No records available.
1897	73,604	2269	30.8	455	200.5	1392	19.3	160	34	No records available.	1358	18.4
1898	74,708	2243	30.0	394	175.6	1407	19.3	180	21	No records available.	1386	18.5
1899	75,812	2301	30.3	359	156.0	1308	17.2	215	43	10	1265	16.6
1900	76,916	2256	29.3	477	211.4	1613	20.9	185	55	8	1568	20.3
1901	78,044	2361	30.2	355	150.3	1331	17.0	219	45	No records available.	1294	16.5
Averages for 10 years—1892-1901, or 5 years, 1897-1901.	73,056	2221	30.3	408	178.7	1375	18.8	192	39	—	1374	18.0
1902	79,114	2339	29.5	265	113.2	1257	15.8	206	58	16	1215	15.3

* Rates in Columns 4, 8, and 13 calculated per 1,000 of estimated population.

NOTE.—The deaths to be included in Column 7 of this table are the whole of those registered during the year as having actually occurred within the district or division. The deaths to be included in Column 12 are the number in Column 7, corrected by the subtraction of the number in Column 10 and the addition of the number in Column 11.

By the term "Non-residents" is meant persons brought into the district on account of sickness or infirmity, and dying in public institutions there; and by the term "Residents" is meant persons who have been taken out of the district on account of sickness or infirmity, and have died in public institutions elsewhere. (For further details see **Text of the Report.**)

Area of District in acres (exclusive of area covered by water)	3,692	Total population at all ages...	77,914	} At Census of 1901.
		Number of inhabited houses... ..	...	16,550
		Average number of persons per house	...	4.7	

LOCAL GOVERNMENT BOARD'S TABLE II.
VITAL STATISTICS OF THE SUB-REGISTRATION DISTRICTS IN 1902 AND PREVIOUS YEARS.

NAMES OF LOCALITIES.	1. Whole City.				2. Bootham Sub-Registration District.				3. Micklegate Sub-Registration District.				4. Walmgate Sub-Registration District.			
	a.	b.	c.	d.	a.	b.	c.	d.	a.	b.	c.	d.	a.	b.	c.	d.
YEAR.	Population estimated to middle of each Year.	Births Registered.	Deaths at all Ages.	Deaths under 1 Year.	Population estimated to middle of each Year.	Births Registered.	Deaths at all Ages.	Deaths under 1 Year.	Population estimated to middle of each Year.	Births Registered.	Deaths at all Ages.	Deaths under 1 Year.	Population estimated to middle of each Year.	Births Registered.	Deaths at all Ages.	Deaths under 1 Year.
1891	67,004	2013	1595	No records available.	17,471	475	354	95	23,676	752	372	133	30,936	1042	632	227
1892	67,807	2165	1423		17,669	517	380	61	23,996	713	349	103	31,109	1013	657	230
1893	69,388	2014	1385		17,900	517	346	67	24,300	685	323	96	31,274	1099	596	196
1894	70,392	2177	1231		18,200	568	361	96	24,577	753	476	143	31,400	935	731	238
1895	71,396	2218	1372		21,193	583	358	91	25,741	769	372	96	30,980	1009	564	168
1896	72,500	2209	1295													
1897	73,604	2269	1358	455												
1898	74,708	2243	1386	394												
1899	75,812	2301	1265	359												
1900	76,916	2256	1568	477												
1901	78,044	2361	1294	355												
Averages of 10 Years 1892-1901, or 5 years, 1897 to 1901	73,056	2221	1374	408	—	532	360	82	—	734	378	114	—	1020	636	212
1902	79,114	2339	1215	265	21,500	572	299	58	26,000	790	398	82	31,500	977	518	125

NOTES.—Deaths of residents occurring in public institutions beyond the district are to be included in sub-columns *c* of this table, and those of non-residents registered in public institutions in the district excluded. (See note on Table I. as to meaning of terms "resident" and "non-resident.")
Deaths of residents occurring in public institutions, whether within or without the district, are to be allotted to the respective localities, according to the addresses of the deceased.

LOCAL GOVERNMENT BOARD'S TABLE III.

DISTRICT—YORK.

CASES OF INFECTIOUS DISEASE NOTIFIED DURING THE YEAR 1902.

NOTIFIABLE DISEASE.	Cases Notified in Whole District.						Total Cases notified in each Sub-Registration District.			Number of cases removed to Hospital from each Sub-Registration District.			Total.
	At all Ages.	At Ages—Years.					Bootham.	Micklegate.	Walmgate.	Bootham.	Micklegate.	Walmgate.	
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 65.								65 and upwards.
Small-pox ...	3	0	0	1	2	0	2	1	0	2	1	0	3
Cholera ...	0	8	13	7	2	1	8	13	0	1	0	2	3
Diphtheria ...	32	1	4	6	42	7	10	22	32	10	22	43	137
Membranous Croup ...	0	77	146	40	13	0	67	102	110	67	102	43	137
Erysipelas ...	64	3	3	3	3	3	3	3	3	3	3	3	3
Scarlet Fever ...	279	0	1	19	20	0	18	17	21	18	17	21	7
Typhus Fever ...	0	56	16	16	20	0	18	17	21	18	17	21	7
Enteric Fever ...	56	1	16	19	20	0	18	17	21	18	17	21	7
Relapsing Fever ...	0	1	0	1	0	0	0	2	1	0	2	1	5
Continued Fever ...	2	0	0	1	0	0	0	2	1	0	2	1	5
Puerperal Fever ...	2	0	0	1	1	0	0	1	1	0	1	1	5
Plague ...	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals ...	438	8	88	75	80	8	105	158	175	105	158	175	416

The Isolation Hospital is situated in Flaxton Rural District.

* These cases of Enteric Fever were received into York County Hospital. † 150 Corporation Hospital and 10 County Hospital.

TABLE IV.

CAUSES OF, AND AGES AT, DEATH DURING THE YEAR 1902.

(Shorter Schedule (B) of Incorporated Society of Medical Officers of Health.)

No.	Causes of Death.	Deaths in whole City at subjoined ages.							Deaths in Sub-Registration Districts (at all ages).				Deaths in Public Institutions (Residents and Non-Residents).
		All ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	Booth'm	Mickle-gate.	Walm-gate.		
1	Small-pox	1	1
2	Measles	39	13	24	1	1	...	3	17	19	6	...	
3	Scarlet Fever	6	...	5	...	...	...	1	3	2	...	...
4	Typhus Fever	0	...	...	...	...	...	0	0	0	...	...
5	Epidemic Influenza	15	7	1	1	...	...	4	7	4	...	...
6	Whooping-cough	15	7	7	...	...	...	0	0	15	...	...
7	Diphtheria, Membranous Croup	7	...	4	2	...	...	1	3	3	...	...
8	Croup	1	...	1	...	...	...	0	1	0	...	...
9	Enteric Fever (Typhoid)	12	...	...	3	...	...	3	3	6	...	...
10	Asiatic Cholera	0	...	...	...	...	...	0	0	0	...	...
11	Diarrhoea (Dysentery)	17	13	4	...	...	...	3	3	11	...	...
12	Epidemic or Zymotic Enteritis	2	...	2	...	...	...	0	0	2	...	...
13	Enteritis	7	3	1	1	...	...	1	3	3	...	...
14	Other Continued Fevers	0	...	...	...	...	...	0	0	0	...	...
15	Erysipelas	5	3	...	...	...	...	1	2	2	...	...
16	Puerperal Fever	1	...	...	...	...	...	0	0	1	...	...
17	Other Septic Diseases	10	1	2	1	...	...	3	4	3	...	...
18	Intermittent Fever and Malarial Cachexia	0	...	...	...	...	...	0	0	0	...	...
19	Tuberculosis of Meninges	29	6	18	0	...	...	4	16	9	...	...
20	Tuberculosis of Lungs	100	1	2	24	63	...	22	30	48	...	...
21	Other forms of Tuberculosis	21	3	5	4	2	...	8	3	10	...	...
22	Alcoholism	5	...	...	...	...	...	2	0	3	...	...
23	Cancer	71	...	...	...	41	...	19	30	22	...	...
24	Premature Birth	33	33	...	...	...	...	9	14	10	...	...
25	Developmental Diseases	94	83	10	...	...	...	24	28	42	...	...
26	Old Age	97	...	...	...	...	...	25	29	43	...	...
27	Meningitis	12	7	3	...	...	...	2	5	5	...	...

TABLE IV.—Continued.

28	Inflammation and Softening of Brain	7	...	...	...	...	...	3	4	3	2	2	3
29	Organic Diseases of Heart ...	112	0	0	3	4	48	57	48	28	36	48	16
30	Acute Bronchitis ...	81	26	14	0	0	22	19	22	26	22	33	9
31	Chronic Bronchitis ...	29	...	...	...	...	22	7	6	8	7	14	6
32	Lobar (Croupous) Pneumonia ...	30	1	0	0	3	6	20	3	10	7	13	11
33	Lobular (Broncho-) Pneumonia ...	47	23	18	1	0	3	2	3	10	17	20	2
34	Diseases of Stomach ...	7	...	...	1	1	2	3	2	1	4	2	2
35	Obstruction of Intestines ...	4	...	...	...	...	1	3	1	0	2	2	5
36	Cirrhosis of Liver ...	10	...	...	1	0	1	8	1	1	4	5	1
37	Nephritis and Bright's Disease ...	31	0	3	3	0	10	15	10	11	7	13	8
38	Tumours and other Affections of Female Genital Organs }	0	...	...	...	...	...	...	...	0	0	0	...
39	Accidents and Diseases of Parturition	8	...	...	...	2	...	6	...	0	6	2	...
40	Deaths by Accident or Negligence ...	29	7	2	4	2	3	11	3	7	11	11	14
41	Deaths by Suicide ...	6	...	...	...	1	...	5	...	1	1	4	3
42	Deaths from Ill-defined Causes ...	6	...	...	...	...	4	2	4	4	0	2	...
43	All other Causes ...	208	35	12	6	3	65	87	65	53	71	84	41
	ALL CAUSES ...	1215	265	138	47	51	328	386	328	299	398	518	206
	OTHER SPECIAL CAUSES (included in Totals of "All other causes" above):—												
	Cerebral Hemorrhage (apoplexy) ...	76	...	...	1	...	43	32	43	26	21	29	11
	Insanity ...	5	...	...	...	...	...	5	...	0	2	3	5
	Diseases of Spinal Cord ...	9	...	...	...	...	5	4	5	3	4	2	1
	Rheumatic Fever ...	4	...	...	1	...	...	3	...	0	2	2	2
	"Convulsions," infantile ...	42	33	9	...	...	...	...	...	5	15	22	0
	Diabetes Mellitus ...	9	...	...	...	1	3	...	3	2	4	3	0

NOTE.—This Table, except in the last Column, excludes the deaths of all "Non-Residents" and includes those of 16 "Residents"
(See Notes in Text of Report.)

TABLE V.

YORK EXTENSION AND IMPROVEMENT ACT, 1884.
INFECTIOUS DISEASES (NOTIFICATION) ACTS, 1889 & 1899.

CASES NOTIFIED TO THE SANITARY AUTHORITY IN EACH YEAR, 1892--1902, WITH ATTACK-RATES
PER 1,000 LIVING OF WHOLE POPULATION.

DISEASE.	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902
Typhoid Fever ...	179	287	95	180	101	106	132	134	244	121	56
Ditto (Attack-rate) ...	2.6	4.1	1.3	2.5	1.3	1.4	1.7	1.7	3.2	1.5	0.7
Scarlet Fever ...	109	156	108	138	194	270	364	200	325	262	279
Ditto (Attack-rate) ...	1.6	2.2	1.5	1.9	2.6	3.6	4.8	2.6	4.2	3.3	3.5
Diphtheria ...	28	30	22	33	20	36	14	28	17	40	32
Membranous Group ...	...	...	...	...	...	...	...	...	2	0	0
Puerperal Fever ...	6	9	1	3	6	2	4	4	10	3	2
Small-pox ...	2	72	3	0	0	0	4	2	0	1	3
Erysipelas ...	...	...	...	...	...	...	...	...	42	44	64

By "Attack-rate" is meant the number of persons attacked per 1,000 of the population.

TABLE VI.

DEATHS IN THE CITY OF YORK FROM THE SEVEN PRINCIPAL ZYMOTIC DISEASES
IN EACH OF THE YEARS 1892-1902.

DISEASE.	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902
Small-pox	0	6	0	0	0	0	1	0	0	0	1
Measles	4	30	27	10	31	28	36	7	40	10	39
Scarlet Fever	1	2	2	4	6	1	8	4	8	7	6
Diphtheria	16	7	4	6	2	5	2	4	6	3	7
Whooping Cough	73	4	39	18	31	28	6	3	47	16	15
Typhoid Fever	27	41	6	22	11	20	17	26	38	15	12
Diarrhoea	97	194	69	183	146	182	120	147	158	102	19
TOTALS	218	284	147	243	227	264	190	191	297	153	99

TABLE VII. QUARTERLY DEATH-RATES FOR FIVE YEARS, 1898—1902.

GENERAL DEATH-RATE PER 1,000 LIVING :—		DEATH-RATE DUE TO BRONCHITIS AND PNEUMONIA, PER 1,000 LIVING:—									
Quarter of Year.	1898	1899	1900	1901	1902	Quarter of Year.	1898	1899	1900	1901	1902
First ...	20.6	17.0	24.5	15.7	19.7	First...	6.0	3.6	6.5	2.2	3.6
Second ...	17.4	14.7	18.5	16.2	15.0	Second ...	2.8	2.2	3.4	2.0	2.1
Third ...	20.4	22.6	23.7	18.6	12.7	Third ...	0.9	1.3	1.2	0.7	1.1
Fourth ...	19.0	16.9	17.3	14.7	14.7	Fourth ...	2.9	3.1	3.6	2.8	2.5
Whole Year.	18.5	16.6	20.3	16.5	15.3	Whole Year	3.0	2.5	3.2	1.9	2.3

ZYMOTIC DEATH-RATE PER 1,000 LIVING :—		INFANTILE MORTALITY (AGES 0—1 YEARS), PER 1,000 BIRTHS :—									
Quarter of Year.	1898	1899	1900	1901	1902	Quarter of Year.	1898	1899	1900	1901	1902
First ...	1.3	0.3	2.4	0.46	2.18	First...	135	84	164	99	136
Second ...	1.1	0.16	2.0	0.56	1.11	Second ...	119	99	142	123	116
Third ...	5.1	8.3	8.5	5.6	0.96	Third ...	283	377	361	256	119
Fourth ...	1.4	1.4	2.3	1.1	1.13	Fourth ...	156	99	161	105	93
Whole Year.	2.6	2.6	3.8	1.96	1.25	Whole Year	175	156	211	150	113

METEOROLOGICAL STATION, YORK.—THE MUSEUM.

Longitude 1° 5' W., Latitude 53° 57' N. Height above Mean Sea Level, 56 feet. Gravity correction, + .024 ins.

1902.	Mean Pressure at 32° Fahrenheit and M.S.Level	Air Temperature.										Humidity.			Barometer.		Sunshine.	
		9 a.m.	9 p.m.	Mean.	Means of		Absolute Min. and Max.		Percentage.			Highest Barometer.	Lowest Barometer.	1902.	Percentages			
					Min.	Max.	Min.	Max.	Day.	Day.	9 a.m.					9 p.m.	Mean.	
																		Day.	Day.
	ins.	°	°	°	°	°	°	°	%	%	%							
Jan.	30.075	39.6	40.0	39.8	36.3	45.4	25.0	53.0	89	88	89	30.945	29.050	31.1	13			
Feb.	29.886	33.6	34.7	34.2	30.0	39.9	18.0	55.0	92	93	93	.882	.247	60.0	22			
Mar.	.770	42.5	42.3	42.4	37.3	51.0	29.0	58.0	85	86	86	.191	.013	79.8	22			
Apr.	.954	47.2	43.9	45.6	37.7	54.3	29.0	65.0	76	81	79	.355	.483	175.4	42			
May	.948	48.5	46.1	47.3	41.0	54.9	32.0	75.0	71	80	76	.421	.162	? 146.5	? 30			
June	.931	56.7	54.5	55.6	48.3	65.0	35.0	83.0	80	83	82	.294	.464	178.2	35			
July	.990	59.0	56.3	57.7	50.2	66.3	40.0	78.0	75	82	79	.280	.236	160.7	32			
Aug.	29.911	57.4	54.6	56.0	49.2	64.6	41.0	71.0	81	88	85	.221	.536	136.6	30			
Sept.	30.060	55.7	53.8	54.8	48.6	63.3	38.0	74.0	80	87	84	.497	.344	131.6	35			
Oct.	29.964	49.6	47.8	48.7	43.6	54.9	33.0	60.0	90	92	91	.423	.175	59.2	18			
Nov.	.886	43.3	44.7	44.0	40.0	49.0	28.0	59.0	92	89	91	.479	.29.217	42.3	17			
Dec.	29.985	41.0	41.5	41.3	37.5	45.8	26.0	56.0	86	87	87	30.631	.28.676	16.4	7			
Year	29.947	47.8	46.7	47.3	41.6	54.5	—	—	83.1	86.3	84.7	30.945	28.676	1217.8	28			

The Registrar-General gives the Mean Temperature of the year as 48° F., and the Mean Rainfall as 19.51.

Heights above Ground :—Barometer, 3 feet; Thermometers, 4 feet; Rain-gauge, 1 foot.

1902	Rainfall.		Weather, No. of Days of							Wind, No. of Observations of									
	Total.	Max.	Day.	Rain.	Snow.	Hail.	Thunder Storm.	Clear Sky.	Over-cast.	Gale.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Calm.
Jan.	ins. 1.01	ins. .28	10th	13	1	0	0	4	12	0	14	2	1	0	5	6	27	7	0
Feb.	1.26	.28	26th	12	3	0	0	3	14	0	8	4	8	9	11	4	3	7	2
Mar.	0.97	.23	14th, 24th	14	2	0	0	0	12	0	3	0	1	1	17	16	21	3	0
April	1.42	.86	15th	11	1	1	2	7	3	0	8	6	12	5	13	4	9	3	0
May	2.23	.47	31st	18	1	0	0	0	9	0	28	2	2	0	5	3	17	5	0
June	1.84	.45	12th	16	0	0	2	3	11	0	14	6	12	5	5	3	10	5	0
July	2.31	.50	25th	16	0	0	2	0	15	0	9	1	3	2	7	6	24	10	0
Aug.	1.93	.69	17th	16	0	0	0	2	16	0	4	4	10	5	15	4	15	3	0
Sept.	0.43	.11	12th	13	0	0	0	6	9	2	11	7	2	4	11	4	12	9	0
Oct.	2.06	.52	13th	22	0	1	0	2	14	0	16	6	5	0	13	10	8	4	0
Nov.	1.33	.35	24th	13	0	0	0	3	13	0	1	0	11	15	22	5	4	1	1
Dec.	1.90	.66	1st	16	4	0	0	1	14	1	4	5	9	3	10	5	22	4	0
Year.	18.69	—	—	180	12	2	6	31	142	3	122	43	76	49	134	70	172	61	3

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